REFORM OF HIGHER EDUCATION WITHIN THE CONTEXT OF THE KNOWLEDGE ECONOMY AND SOCIETAL CHANGE IN EGYPT

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ABSTRACT

This study explores models for the reform of higher education in Egypt, and warns of potential consequences arising from the adoption of models based exclusively on the requirements of the knowledge economy and which fail to take account of the public role of national universities, socio-cultural realities and local as well as global pressures.

The overall aim of the research is to identify the prerequisites for higher education reform in Egypt and the characteristics of a tailor-made reform model. It explores the role of higher education in Egypt, within the context of international organisations' reform models for less-developed countries, and identifies the remits of the knowledge economy and knowledge society as frameworks for reforming higher education.

This research has sought to answer questions on current conceptions of the role of higher education in Egypt and how these are being challenged by stakeholders. An exploratory study was designed using mixed methods. The research aim and objectives are achieved through a five-stage research process.

The findings showed a general discontent among students and academics with higher education, and a near unanimity on the need for reform, particularly in the areas of teaching methods, curricula and university staff. The findings demonstrated that cultural issues deeply rooted in Egyptian society are preventing reform from being effective. The reform of higher education in Egypt should not only be part of an economic development vision, but a wider strategic vision for societal and cultural reform too.

Reforming higher education in Egypt is a challenge, which will require consistent methodological rigour and a transformation of the current corrupted education culture prior to implementing the proposed OECD recommendations, or at the very least concurrent with any implementation.

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ABBREVIATIONS AND ACRONYMS

AHDR	Arab Human Development Report
ASEAN	The Association of Southeast Asian Nations
CAQDAS	Computer Assisted Qualitative Data Analysis Software
EEP	World Bank Education Enhancement Project
ETCP	The Egyptian Technical Colleges Project
EU	European Union
FLDP	The Faculty and Leadership Development Project
FOEP	The Faculty of Education Project
GCC	The Gulf Cooperation Council
HEEP	The Higher Education Enhancement Project
HEEPF	The Higher Education Enhancement Project Fund
HEI	Higher Education Institution
ICTP	The Information & Communication Technology Project
IGO	International Governmental Organization
KE	Knowledge Economy
KS	Knowledge Society
MBRF	Mohammed Bin Rashid Al Maktoum Foundation
MoHE	Ministry of Higher Education in Egypt
NAQAAE	National Authority for Quality Assurance and Accreditation of Education
OFF	Officials from the MoHE and the NAQAAE
PIF	Prominent Intellectual Figure
SME	Subject Matter Expert
UNDP	United Nations Development Programme

DEDICATION

This work is dedicated to my parents and my children.

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CHAPTER 1

1. INTRODUCTION

The initial purpose of this chapter is to provide a background and a theoretical framework for the study. The rationale and significance of this study are demonstrated to inform the problem statement as well as the research questions, aim and objectives. The chapter concludes with an overview of the thesis.

1.1. Background

In 2002, the United Nations Development Programme (UNDP) published the first Arab Human Development Report (AHDR), which described the critical state of education in the Arab world (UNDP, 2002). An increased awareness of the need for educational reform was highlighted by this as well as by subsequent UNDP reports, most notably the 2003 report, *Building a Knowledge Society* (UNDP, 2003).

In 2008 the World Bank report, *The road not traveled: education reform in the Middle East and North Africa*, stressed the need for filling the existing gaps between actual attainments of the education systems in the region and what is needed in order to achieve current and future development objectives (World Bank, 2008).

Six years after the publication of AHDR 2003, the Mohammed Bin Rashid Al Maktoum Foundation (MBRF), in collaboration with the UNDP, responded by publishing 'The Arab Knowledge Report 2009: Towards Productive Intercommunication for Knowledge'. The report stressed the urgent need for action to establish a knowledge society in the Arab region and utilise knowledge in the service of human development, in order to catch up with the global knowledge economy. It also discussed the both the main helping and hindering factors on the road to establishing knowledge societies in the Arab region with a focus on freedoms as a basic requirement for the empowerment of a knowledge society (MBRF, 2009). However, rather than formulating a coherent model for reforming higher education, the report suggests a wider framework emphasising the need to fill the gap in Arabic knowledge content and broadening the scope

of freedom.

In 1997, Egypt committed itself to embarking on a reform of higher education with support from the World Bank, and established its National Commission on Higher Education Reform for that purpose, reflecting an increased awareness of the need for action to be taken in order to address the issue of educational reform in general, and higher education reform in particular.

Over a decade later, and at the request of the Egyptian government, the Organisation for Economic Co-operation and Development (OECD) and the World Bank jointly conducted an independent review of the higher education system in Egypt, formulating options for immediate and longer-term policies towards developing its human capital. Their report, 'Reviews of National Policies for Education, Higher Education in Egypt' was published in April 2010 (OECD, 2010).

The knowledge economy based on a neoliberal version of globalisation is putting pressures upon countries and their universities. In Egypt, a country with over 34% adult illiteracy, reforming higher education without the appropriate public support and public role for national universities acting for a broader public good while balancing both local and global pressures, may have some disastrous consequences. These consequences could include inequalities in society, continuous brain drain and the diminution of Egypt to the role of consumer in the global higher education market. Adopting the World Bank and OECD model of higher education as represented in the 2010 report, based exclusively on the requirements of the knowledge economy is likely to widen existing divides and give rise to new forms of exclusion; not only between the developed countries and Egypt, but also within Egypt due to a decline in the state's commitments towards higher education. This may lead to the commoditisation of higher education and may permanently relegate Egypt to consumer status in the global knowledge economy. Figures alone concerning knowledge economies cannot necessarily take account of socio-cultural realities.

The aim of this research is to identify the characteristics of a higher education reform model in Egypt for a global knowledge economy (economic development) within the framework of the knowledge society (social

development). This aim necessitates drawing the remits of the knowledge economy and knowledge society as contexts for reforming higher education.

The study explores the current and historical role of higher education in Egypt and the intention of the government of Egypt to reform higher education, along with the associated national strategies, within the context of the variations between the international organisations' reforming models for higher education in less-developed countries. This draws on the internal logic of the World Bank and the OECD in introducing certain reform models for less-developed countries. The research also seeks to identify the priorities and prerequisites for the reform of higher education in Egypt.

This research is concerned with answering questions on current conceptions of the role of higher education in Egypt and how these are currently being challenged by the perceptions of the stakeholders. It asks whether there are prerequisites to the reform of higher education in Egypt and, in the absence of compelling models in the region, what are the priorities of higher education reform.

In seeking to address these research questions, an exploratory study has been designed using a mixed-methods model with an aim of maximising the validity of the findings through examining the same issues via different methods. The research aim and objectives are achieved through a five-stage research process.

Egyptian public and private universities and higher institutions in the various governorates were grouped into five broad geographical areas taking into account the social, cultural, economic, and political characteristics in common among those governorates. A total of 1,005 undergraduate students and 439 postgraduate students took part in the respective surveys, while a total of 329 academics took part in the academics' survey.

1.2. Theoretical Framework

The philosophical assumption of this study is that the social and cultural context is a vital dynamic, especially when it comes to education reform. Cultural and social aspects that have been developed outside of the knowledge economy framework may potentially have an impact on the success of the proposed

model for reforming higher education in Egypt. Figures concerning knowledge economies alone do not sufficiently take account of socio-cultural realities.

Understanding a phenomenon's context is indispensable in sociocultural theory, since socioculturalism acknowledges the complexity of the social world and its impact on human beliefs and actions. Hence, sociocultural research is concerned with integrating the domains of the human experience, "individual", "society" and "culture", to address the phenomenon. The inclusion of the three domains in sociocultural research is not essential, but including more than one domain is indispensable to address the effect of social interactions. When it comes to the field of education, the sociocultural perspective is a particularly relevant framework, since it is informed by research in multiple disciplines (Schoen, 2011).

The research questions sought to cognise higher education in Egypt in a wider context through its current state and the perceptions and experiences of the stakeholders with an overall aim of identifying the characteristics of a tailor-made model for reforming higher education. Thus, it was necessary to understand the cultural, socio-economic and political settings. The intention of this research is to study the situated context holistically and explore the issues that may impact the reform of higher education in Egypt.

The sociocultural approach was crucial to understand the findings in the cultural, social and historical context to reflect the richness and complexity of the Egyptian case of higher education. Schoen (2011, p.19) stated that "*the sociocultural researcher must be to somewhat of a generalist in order to see the big picture of the socially and culturally situated context*". Due to multiple domains of factors implicit in the sociocultural perspective, it was necessary to survey multiple literature domains to obtain an overview of the key factors involved. The literature review is organised according to identified domains pertinent to the study area, that synthesises the literature thematically. The literature review themes include the role of higher education, the reform of higher education, higher education for a knowledge economy, international organisations, reform models and the knowledge economy and knowledge society frameworks.

1.3. Rationale and Significance of Research

Literature on the reform of higher education in Egypt, whether Western or Egyptian, is limited, and usually focuses on either employment and job market perspectives, or pedagogical perspectives. This research provides a holistic and conceptual approach to a set of higher education issues in Egypt within the social, political and cultural context.

The research fills knowledge gaps about the role of higher education, and particularly the role of universities within the Egyptian context in reference to the global context of knowledge economy and knowledge society. It also strives to provide new knowledge about the perception of higher education among the stakeholders and society, the priorities for reform and the global vision for higher education in less-developed countries.

The study captures stakeholders' views and perceptions of higher education, which have rarely been presented across such a wide spectrum of issues pertaining to higher education. This offers baseline data for future studies and allows for periodic monitoring of higher education development in Egypt along with the associated perceptions among stakeholders, in order to manage stakeholders' expectations and inform strategic planning.

Figure 1: Reform Plans and Managing the Expectations

This research attempts to set out a framework for the reform of higher education in Egypt from which a tailor-made reform model can be informed and developed, to position higher education and to maintain a balance among a complex set of concepts: higher education as public good versus private good, higher education as a human right versus an investable commodity and provision of higher education versus regulation (see Section 3.9, 'Conceptual

Framework).

The research offers insights on higher education in Egypt along with its political, economic, social and cultural aspects, thereby informing:

(a) Academics and stakeholders, by giving them a better understanding of the university role and reform implications;

(b) Policy makers at state level, by conceptualising higher education issues and providing a configurable reform model to meet stakeholder expectations and developmental goals;

(c) Society, by demonstrating the implications and consequences of reforming higher education within the context of either the knowledge economy or the knowledge society frameworks; and

(d) International organisations (concerned with higher education) by demonstrating that reform models may differ from country to country even within the same classification group (e.g. less-developed countries), subject to social and cultural settings, and enabling subject matter experts to respond to local needs rather than raw competitiveness indices.

1.4. Problem Statement

Egypt in 2016 faces a host of economic, political and social issues, many of which have resulted from decades of autocratic rule. Education has been one of many areas which has suffered in the process, and which has frequently been treated as less of a priority than other issues which were considered more urgent (e.g. health, infrastructure, defence etc.), and therefore not been given the required attention and resources. While Egypt's diversified economy presents some growth potential (SABER, 2014), it is imperative to realize that the continued inadequate investment in education will come at the expense of Egypt's economic development and competitiveness. Structural deficiencies in the education system must be addressed, and effective educational policies implemented.

The great challenge for Egypt is for its job market to absorb the 850,000 new entrants to the labour force every year. The World Bank identified Egypt's inadequately educated workforce and skills shortage as being among the main obstacles to economic development and competitiveness (SABER, 2014).

OECD Secretary General Angel Gurria has pointed to the clear mismatch between available skills in the job market and employer expectations in Egypt, noting that in 2012, 600,000 job vacancies remained unfilled (Gurria, 2012). However, this does not mean that enrolment expansion will produce qualified graduates to fill these jobs or create more jobs for youth, but it means low quality higher education produces graduates without the skills to fill the available jobs.

A new strategy was launched for higher education in 1997 with support from the World Bank. However, it soon stalled, and the quality and efficiency of higher education continued to decline. The 2010 OECD review, which was to propose a model of reform for the higher education system in Egypt, stated that the aim is for Egypt "*to deliver relevant education to the job market for a broader range of students*" (OECD, 2010, p.3) with an emphasis on widening the admission criteria for more inclusiveness. This may have a great impact on quality as well as the cost burden to the government. The provided solutions by the OECD for sharing the cost burden of higher education may not be feasible without the expansion of private higher education. "Widening the admission criteria" for higher education as described by the OECD (2010, p.31, p.140) reflects lack of awareness of the reality and may lead to the collapse of the whole education system.

In light of the existing instability, are OECD recommendations capable of bringing about a reform of higher education in Egypt and achieving the desired aim, namely economic growth? The success of the reform model proposed by OECD and World Bank for less-developed countries is not necessarily guaranteed in Egypt. Cultural, social and political aspects that have developed outside of the knowledge economy framework may potentially have an impact on the success of the proposed model. For example, the perception of students and academics of higher education is a major component of the reform process, in addition to the continuous brain drain of Egyptian knowledge workers, whether for economic or more recently for political, social and cultural reasons. Furthermore, consequences such as the commoditisation of higher education and the increase in the knowledge divide may well be expected in Egypt with an adult illiteracy rate of over 34%. There was an obvious lack of consultation on the reform of higher education with the stakeholders (e.g. academics, students),

the concerned parties (e.g. professional associations, business and industrial sectors) and society as a whole (e.g. parents, prominent intellectual figures), as well as no society-wide debate, which might enable a longer and wider discussion. The debates on higher education reform in Egypt remain largely restricted to a limited number of governmental institutions along with the OECD and the World Bank, and possibly guided only by knowledge-based economic logic.

In Egypt, a country where universities traditionally lack independence, reforming higher education needs to be undertaken with appropriate public support and a clear definition of the role of higher education in the wider development goals. Ignoring these aspects may have severe consequences, including inequality in society, the flight of the country's best and brightest and Egypt becoming nothing more than a consumer in the global higher education market. The World Bank and OECD model of higher education, based exclusively on the requirements of the knowledge economy, risks actually exacerbating existing divides and creating new forms of exclusion within the country, in addition to globally, as the state lessens its commitment towards higher education. This may further cause commoditisation in higher education and may permanently relegate Egypt to consumer status in the global knowledge economy.

As it moves towards a knowledge economy, it is anticipated that Egypt will face a major challenge in developing scientifically validated knowledge, which has become a main source of societal culture (Stehr, 1994 cited in Simons, Haverhals, & Biesta, 2007), without neglecting its vital local and implicit knowledge. In addition to the risk of commoditisation of higher education, there is a potential that substituting scientific knowledge for local knowledge, in the absence of a knowledge policy that guides the education system, could have grave consequences. These could include the erosion of local culture under the hegemony of globalization in a variety of forms, such as the displacement of the Arabic language as vehicle for knowledge, and accentuating the knowledge divide in society by adding to the existing categories (illiterate and educated) that of the knowledge workers for whom English is the vehicle for scientific knowledge. While the importance of multilingualism is important for the facilitation of access to knowledge, promoting mutual knowledge of cultures will not be useful unless technological innovations offer a means of renewing what

Paul Ricoeur has aptly called "*the miracle of translation*", attesting thereby to the everlasting capacity of human beings to create common shared meaning on the basis of differences (cited in UNESCO, 2005, p.148).

Figures concerning knowledge economies alone do not sufficiently take account of socio-cultural realities. One such reality is the Egyptians' perception of higher education and university degrees primarily as a sign of respectability and a symbol of social status. This perception is partly responsible for the large numbers joining and graduating from higher education institutions (HEIs) every year, which in turn has led to rising unemployment among young graduates, as well as a deterioration in the quality of higher education and a devaluation of academic degrees. Educational reform, which fails to profoundly understand and comprehensively address such issues, will remain inadequate for the Egyptian context.

1.5. Research Aim, Objectives and Questions

1.5.1. Research Aim

The ultimate aim of this research is identifying the characteristics of a tailor-made model for reforming higher education in Egypt that could constitute a society-centric model with high impact on the knowledge economy and consequently the public good. To achieve this aim it was necessary to identify the research objectives.

1.5.2. Research Objectives

The research objectives were identified and linked to the research questions. The answers of the research questions should directly feed into the research objectives that achieve the overall aim of this research.

The research project explores the following:

- Stakeholder perceptions of the status of higher education.
- The conceptions of the role of higher education in Egypt and how these are being challenged.
- Higher education reform components that reflect the priorities for public good and private good.

- The internal logic of World Bank and OECD in introducing certain reform models for less-developed countries.
- The perspectives of stakeholders, subject matter experts and prominent intellectual figures on the reform of higher education in Egypt.

1.5.3. Research Questions

The initial review of literature allowed for the identification of certain knowledge gaps and consequently research questions. All questions that were raised during the literature review have been grouped according to the research objectives. A core question was developed from each group that responds directly to a certain objective. This process was iterative to fine-tune the research questions while reviewing the literature to ensure the relevancy and the contribution to the corpus of knowledge. However, during the course of the study some changes occurred in terms of phrasing the questions to ensure coherence.

To answer the research questions and achieve the overall aim of this study it was necessary to understand the cultural, socio-economic and political settings as well as the education system in Egypt (see Chapter 2, 'The Egyptian Context'). On the other hand, the research questions are derived from certain knowledge gaps that were identified in the review of literature and are mainly associated with the conception of the role of higher education in Egypt, the perception of higher education in Egypt among the stakeholders and the priorities of higher education reform (see Chapter 3, 'Literature Review and Conceptual Framework'). The following research questions culminated the literature review within the Egyptian context:

- How do students and academics perceive higher education in Egypt?
- What are the views of academics and prominent intellectual figures on the role of higher education in Egypt?
- What are the perspectives on the prerequisites and priorities of higher education reform in Egypt?

The research questions seek to conceptualise higher education in Egypt in a wider global context with an overall aim of identifying the characteristics of a tailor-made model for reforming higher education.

The university role has a great impact on identifying the nature and characteristics of the desired reform (see Section 3.4, 'Role of Higher Education'). An informed strategy for reform requires a clear vision of the university role. Hence, this study is investigating the role of universities in Egypt.

Identifying the priorities of the reform will set the parameters for the tailor-made reform model (see Section 3.9 'Conceptual Framework'), while prerequisites are crucial to contextualise the reform in terms of socioeconomic, political and cultural aspects (see Chapter 2, 'The Egyptian Context').

Answering the research questions stipulated the utilisation of both the quantitative approach and the qualitative approach for collecting data. The first question, 'How do students and academics perceive higher education in Egypt?' is answered through the questionnaires for students and academics, whereas the second question, 'What are the views of academics and prominent intellectual figures on the role of higher education in Egypt?' is mainly answered through the interviews to the prominent intellectual figures and the questionnaire for academics. The third question, 'What are the perspectives on the prerequisites and priorities of higher education reform in Egypt?' is answered through the feed from both the interviews and the questionnaires, which reveals an array of perspectives and point of views, as well as the grey literature review of international organisations' reports.

The research has been developed over five stages: the students' questionnaire, the academics' questionnaire, the SMEs' interview, the PIFs' interview and the officials' interview, all of which were mapped to the aim and objectives to ensure that all research questions are answered and the findings are relevant.

1.6. Overview of Thesis

This thesis consists of seven chapters. In **Chapter One**, a background is provided to the research problem along with the theoretical framework and the significance of the research that inform the problem statement as well as the research aim and objectives.

Chapter Two is devoted to the Egyptian context including the cultural, socio-economic and political context, since the philosophical assumption is that the

social and cultural context is a vital dynamic for the reform. A background is provided to the higher education system with an emphasis on the emergence and development of the concept of inclusiveness of higher education across various constitutions.

Chapter Three reviews the relevant literature to address the characteristics as well as the conceptual relation between knowledge economy and knowledge society as frameworks for reforming higher education. It then reviews the development of the university's role with reference to public good and production of knowledge, and reflects on the reform models. Subsequently, it looks at the commercialisation of and the investment in higher education. The literature review also includes the internal logic of international organisations proposing reforms in the field of higher education in the less-developed countries. Chapter Three also presents an overview of previous reform initiatives, including the invitation to the OECD to evaluate and propose a reform plan for higher education in Egypt. In order to adequately comprehend the Egyptian case, it was necessary to include academic views on higher education in Egypt. The literature review concludes with the conceptual framework of this study.

Chapter Four presents the research methods that have been used to address the research questions. An exploratory study was designed using a mixed methods model with an aim of increasing the validity of the findings. The hermeneutics method has been utilised as a model for discussing the findings of a five-stage research process to deepen understanding and reveal new dimensions of the topic. In ***Stages 1-2***, the fieldwork revolved around online questionnaires for undergraduate and postgraduate students as well as academics across private and public HEIs in Egypt. Also, semi-structured interviews (***Stages 3-5)*** were conducted with prominent intellectual figures in Egypt and subject matter experts from OECD and UNESCO as well as officials/decision makers, respectively.

The qualitative and quantitative data analyses are consolidated in rich findings in **Chapter Five**. The findings are normalised into twenty-one overarching themes over five sections that correspond to the research questions. The following themes are analysed in terms of their relevance to research objectives and the overall aim:

- Curricula, Teaching, Research, Academic Support, Examinations and Assessments.
- Resources and Facilities, Students' Union and Youth Welfare, Administration, Ethics and Values.
- Quality of Higher Education, Satisfaction, Merits to the Higher Education System and University fees.
- Role of Higher Education, Student Demand and Job Prospects.
- Reform of Higher Education, Views, Government Intention, International Organisations, Priorities and Prerequisites.

Chapter Six discusses the findings of the questionnaires and the interviews within the context of the conceptual framework of the thesis (see Section 3.9, 'Conceptual Framework'), to achieve the overall aim of identifying the characteristics of a tailor-made model for reforming higher education in Egypt.

The discussion is organised according to the criteria of the conceptual framework (reconciliation of State, Society and Market), which include: 'Expansion and Inclusiveness', 'Quality of Higher Education', 'Student Demand and Job Market', 'Role of Higher Education', 'Private Higher Education', 'Government Intention', 'International Organisations' and 'Reform of Higher Education'. The discussion concludes with the prerequisites for reforming higher education in Egypt.

Chapter Seven, the concluding chapter, opens with the main findings, which are structured according to the research questions and followed by implications for policy and advancement in the field. Contribution to knowledge has been highlighted and followed by personal reflections on the thesis, scope and delimitation, and suggestions for further research to achieve a fine tuned tailor-made reform model for Egypt.

1.7. Summary

A holistic and conceptual approach is needed for a deep understanding of the current status higher education in Egypt and its role within the economic, social, political and cultural contexts. In the absence of a compelling model for the region, a tailor-made model for the reform needs to be defined to avoid the risk of commoditisation of higher education among other risks.

CHAPTER 2

2. THE EGYPTIAN CONTEXT

2.1. Introduction

This chapter extends the background of the study to the Egyptian cultural, socio-economic and political context. It provides an overview of the Egyptian education system, with a historical background, which touches on the emergence and development of the concept of inclusiveness of higher education across various constitutions. This will allow for a more profound understanding of the research findings at the analysis and discussion stage, putting issues in perspective.

2.2. Socio-Economic and Political Context

Egypt represents diverse geographic, cultural, social, economic and political groups, and falls into the diversified economy group (MBRF, 2009) within the less developed countries in the low-medium income category. It is also a part of Africa, with its own development challenges, the Mediterranean with its links to the European Union, the Arab world with its social, cultural and religious aspects, and the Middle East with its political issues, but it is also a country with its own unique culture and history.

Egypt has a population of 84.2 million (2015), with an urban population of 43.09% and wide regional disparities in the levels of social and economic development. More than one third of the population is under the age of 15 (World Economic Forum, 2014), while over 23.5% falls in the age group 18-29, which represents 32% of the labour force (UNDP, 2010).

According to the World Bank's online data bank , Egypt is a lower middle-income country, ranking as the world's 38th largest economy (2014), with a GDP of US$286.5 billion and per capita GDP of US$3,436. The annual growth rate was 2.2 percent.

In 2011, Egypt's labour force was around 27.7 million, up from 21.3 million in 2005 (Saber, 2014). However, growth in employment, which was particularly

noticeable in the private sector, was not enough to reduce overall unemployment figures, which were officially stated to be around 13% by the end of 2012, and are widely believed to be much higher. With 850,000 new annual entrants to the job market, more than 75% of the unemployed are between the age of 15 and 29 (SABER, 2014). Informal employment accounted for around 61% of the workforce in 2006 (Assaad, 2007).

On the 2014-15 Global Competitiveness Index, Egypt's rank fell to 119th out of 144 countries from 81st out of 133 countries in 2010-11, when the performance of Egypt was already only modestly competitive. This relegation in the competitiveness index is mainly due to the low efficiency of the job market, in particular the reliance on professional management (ranked 134/144), poor quality and irrelevancy of higher education and training (ranked 141/144), and the misalignment between workforce development plans and economic development goals on one hand and higher education plans on the other (SABER, 2014). In relation to doing business in Egypt, one of the most serious problems identified was an inadequately educated workforce. Egypt has a 74% adult literacy rate (2012), and the rate among women is particularly low. These and other conditions, according to Kozma (2005) serve as constraints on the type and amount of economic growth that Egypt can expect in the near future. Among the most significant competitive disadvantages for Egypt were higher education and training, as well as innovation and technological readiness (World Economic Forum, 2014).

From 1981 to 2011, President Hosni Mubarak was Head of State as well as leader of the National Democratic Party, which controls the People's Assembly. During this time the country was under a continuous state of emergency, which meant that public participation in politics was restricted.

Following three decades of Mubarak's authoritarian rule, which ended with the January 2011 revolution, the ongoing political and social tensions and instability have placed immense pressure on the country's economy, which has grown at an annual rate of only 0.3% since 2011 (SABER, 2014). Under the current 'semi-military regime', poverty rates and unemployment rates remain high, while freedoms remain limited. Egypt scored 127th out 178 countries on the 2010 World Press Freedom Index (World Press Freedom Index, 2010) and 158th out

of 180 countries on the 2015 World Press Freedom Index (World Press Freedom Index, 2015).

Educational reform and the provision of job opportunities were closely linked to Egypt's youth-led 25th January revolution, with its key demands of 'bread, freedom, and social justice'. The constitutional amendments of 2014 included both health care and education (including tertiary education) as social rights. However, on the ground there is no indicator that any real change will happen. Instead, attention is now fully focused on security and the war on terrorism, ignoring the fact that education too can play a key role in that war.

2.3. Cultural Context

The 1964 Constitution declared Islam the official religion of State. The majority of the population is Sunni Muslims (around 90%) with a considerable portion of them following native Sufi orders. The rest are mainly Coptic Orthodox along with fewer numbers of Catholics.

The last three decades witnessed many manifestations of a cultural decline such as fanatic Islamic movements, the decline of the Arabic language in the mass media, the deterioration of the quality of education and the weakening of the Egyptian soft power among the Arab countries. According to Amin (2000), the decline is usually attributed to the growing inequality in income distribution since the 'Open Door' economic policies in the 1970s. However, he attributed the cultural decline as well as the economic and social crisis to the change in Egypt's social structure and to a rapid rate of social mobility. By the same token, Cook (1999) attributed the struggle of Egypt's national education system to the rapid urbanisation, rampant population growth and modest economic growth. However, he considered the deliberate deterioration of the society's cultural norms by secularism to be one of the most damaging aspects of European colonialism. The role of the infused secular education institutions was merely to produce employees necessary to feed the bureaucratic and administrative needs of the state (Cook, 1999). Within the current framework of the secular higher education, maintaining the societal values and the country's identity, and forming leaders and thinkers based on such values have been neglected, intentionally or otherwise. On the other hand, the role of traditional religious

education (i.e. Al-Azhar University) is sustained by the state to somehow maintain the religious values and the country's identity. This situation has been a continuous source of cultural dualism in the Egyptian education system. The expansion of private higher education as proposed by the OECD reform model is establishing yet another layer of dualism between private education and public education, rather than tackle the existing issues (including the dualism between religious and secular education) of the public higher education.

In light of the current political tension between radical religious movements and the government, it may be detrimental for the social fabric to have a secular and a religious higher education system operating with distinct roles and goals.

Amin (2000, p.28) described the so-called resurgence of religious movements and the 'Islamic revival' as "*not a strengthening of religious belief as much as the increasing observance of religious rituals and ceremonies, and the stricter adherence to an outward pattern of behavior associated with Islam, such as the adoption of the veil by larger numbers of women ….. the broadcasting of the Friday prayer through loudspeakers, and the widespread trend of interrupting the day's work for the observance of the daily prayers on time*". He pointed out that the current interpretations of Islam are widely accepted by university students despite the fact that these interpretations are irrational and primitive. Cook (1999) explained this rising trend by the increasingly uncertain future facing young Muslims.

On a different note, the current dilemma of the Arabic language is not only limited to the severe lack of Arabic knowledge content but also the inability of people to communicate and express themselves in the standard Arabic and without fatal grammatical errors. Amin (2000, p.88) attributed the declining of the Arabic language to a combination of reasons such as the general decline in education quality including the low standard of language teaching and the wide spread of mass media that address the broad masses, whose educational levels are generally inferior to those of school pupils. However, he believed that "… *the main source of trouble lies not in a lack of ability, but rather in a lack of will; it is not that people are no longer capable of expressing themselves correctly in Arabic, but that people no longer want to do so, or are no longer willing to make the effort. If this is the case, then it will never be enough to*

produce competent teachers, or to ensure that quality is not sacrificed to quantity". Sharma, Ng, Dharmawirya & Keong Lee (2008) referred to the 'Role of Mass Media' dimension of the knowledge society framework in disseminating information and knowledge in the public sphere and the necessity of media literacy skills for accessing and analysing information resources, which are often correlated with political maturity as well as economic development and literacy.

2.4. The Constitution and Education System

Every Egyptian has been guaranteed the right to free public education since 1925. Russell (2001) asserts that there was frustration and unmet expectations among Egyptians after Egypt's partial independence in 1922. So bowing to political pressures, the government made primary education obligatory for boys and girls in 1925, despite the lack of resources and facilities to implement such a decision. "*The great irony is that after the 1952 revolution and subsequent legislation ensuring free education at all levels and government employment of graduates, the system became so overloaded such that now Egyptians desire neither government schools nor government employment*" (Russell, 2001, p.57). In pursuit of social justice or to appease the majority of Egyptians, the 1952 revolutionary regime committed itself to free public education for all. These commitments were consolidated in the first constitution after the 1952 revolution, the 1971 constitution, which stated in article 18 that

> *"Education is a right guaranteed by the State.*
>
> "*It is compulsory at the primary stage*[1]*, and the State shall strive to make it compulsory at the other stages*.
>
> "*The State shall supervise all branches of education and guarantee the independence of universities and scientific research institutions, with a view to linking all of them to the requirements of society and production*".

And in article 20: "*Education in the State educational institutions shall be free of charge at the various stages*" (Constitution, 1971) to ensure equity and inclusiveness across society.

[1] From age 6 to age 12

After the revolution of the 25th of January 2011, the Egyptian constitution went through wide public debate and consultation, producing a series of modifications resulting in the constitution of 2014, which gave greater commitment to the right to education and was more explicit on the role of education. Obligatory education was extended from the primary stage to the secondary stage[2] or its equivalent (i.e. technical path). Article 19 stated,

> "*Every citizen has the right to education. The goals of education are to build the Egyptian character, preserve the national identity, root the scientific method of thinking, develop talents and promote innovation, establish cultural and spiritual values, and found the concepts of citizenship, tolerance and non-discrimination. The State shall observe the goals of education in the educational curricula and methods, and provide education in accordance with international quality standards.*
>
> *"Education is compulsory until the end of the secondary stage or its equivalent. The State shall provide free education in the various stages in the State's educational institutions according to the Law.*
>
> *"The State shall allocate a percentage of government spending to education equivalent to at least 4% of the Gross National Product (GNP), which shall gradually increase to comply with international standards.*
>
> *"The State shall supervise education to ensure that all public and private schools and institutes abide by its educational policies*" (Constitution, 2014).

The 2014 constitution stressed the reform of higher education and explicitly pledged that free higher education would be provided at state universities. Equal access to state universities is, however, on the basis of merit. Hence, there is also an emphasis on encouraging the establishment of non-profit private universities. Article 21 stated,

> *"The State shall guarantee the independence of universities and scientific and linguistic academies, and provide university education in accordance with international quality standards. It shall develop and ensure free*

[2] From age 16 to age 18

provision of, university education in State universities and institutes according to the Law.

"The State shall allocate a percentage of government spending to university education equivalent to at least 2% of the Gross National Product (GNP), which shall gradually increase to comply with international standards.

"The State shall encourage the establishment of non-profit, non-governmental universities. The State shall guarantee the quality of education in private and non-governmental universities, ensure that they comply with international quality standards and that they build the capacity of their faculty members and researchers, and allocate a sufficient percentage of their returns to educational and research development" (Constitution, 2014).

The new Article 20 stated, "*The State shall encourage and develop technical and technological education as well as vocational training, and expand all their types in accordance with international quality standards and in accordance with job market needs*" (Constitution, 2014). This article sheds light on some features of the higher education reform by pointing out the importance of technical and vocational education and the need to link it with the job market, whereas there is no mention of the job market in association with universities. This may raise some questions on the role of universities under the current constitution, since the focus was on the social and cultural role of education as a whole, as per article 19.

One of the advantages of the 2014 constitution is the stipulation of a minimum of 2% and 1% of the GNP for universities and scientific research respectively, to be increased gradually until they reach the international rates.

The current education system in Egypt (see Figure 2, 'Egyptian Education Structure') begins with the basic education (from age 6 to age 15) covering nine years (six years of primary stage and three years of preparatory stage), followed by secondary education, where students are tracked into either general secondary or vocational/ technical secondary schools. Broadly 40% of a student cohort tracks into the general secondary strand and 60% into the

technical secondary strand. Around 60% of students enter technical secondary schools, where they are further split into either a three-year technical education strand or an advanced five-year advanced technical education strand. The remaining 40% of students enter the three-year general secondary education, ending in the 'Thanaweya Amma', the standardised entrance examination for Egyptian universities. Private and public HEIs in Egypt also include technical colleges offering two-year programmes that lead to a Diploma, and universities, with programmes of at least four years leading to a Bachelor's degree, as well as graduate degrees (OECD, 2010).

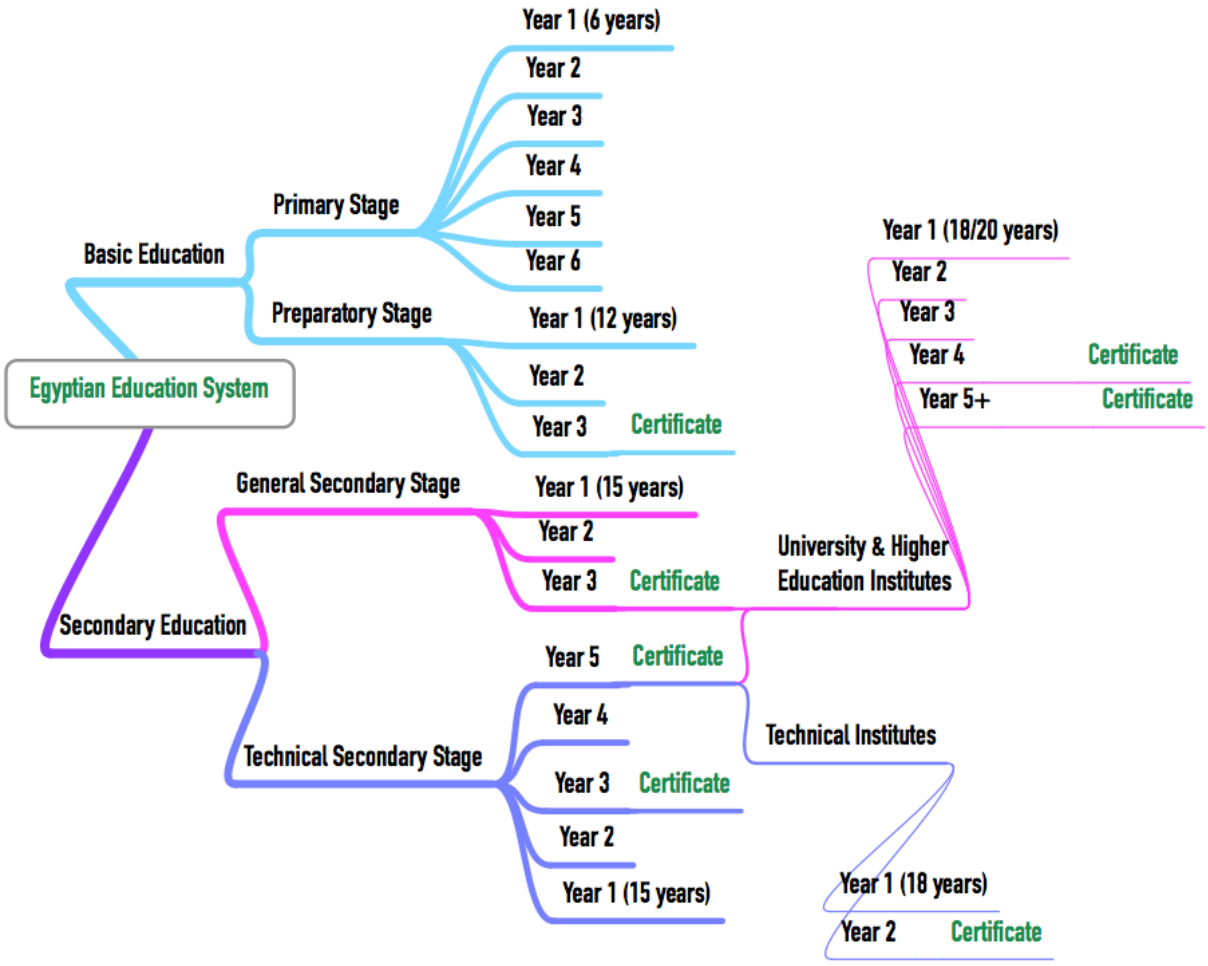

Figure 2: Egyptian Education Structure

The Egyptian higher education system is state-centric. The Ministry of Higher Education (MoHE) stipulates the target number of entrants to higher education, while the Supreme Council of Universities regulates the number of entrants for each university faculty accordingly (Cupito & Langsten, 2011).

With more than 2.5 million Egyptians now attending HEIs, the current number of universities cannot keep pace with the anticipated enrolment growth of 40% by 2022 (Helal, 2011). Figure 3, 'Higher Education Enrolment', shows that the gross enrolment ratio in higher education rose from 14% to 33% between 1990 and 2013. However, this ratio has been maintained at the same level (just over 30%), since at least 1999 (no data is available for 1992 to 1998). At that time, it seems that the government was more concerned with handling the enrolment growth rather than dealing with the declining quality of higher education. Hence the establishment of the National Commission on Higher Education Reform in 1997 and the initiation of the first strategy for reforming higher education in 2000, followed by the establishment of the National Authority for Quality Assurance and Accreditation of Education in 2007.

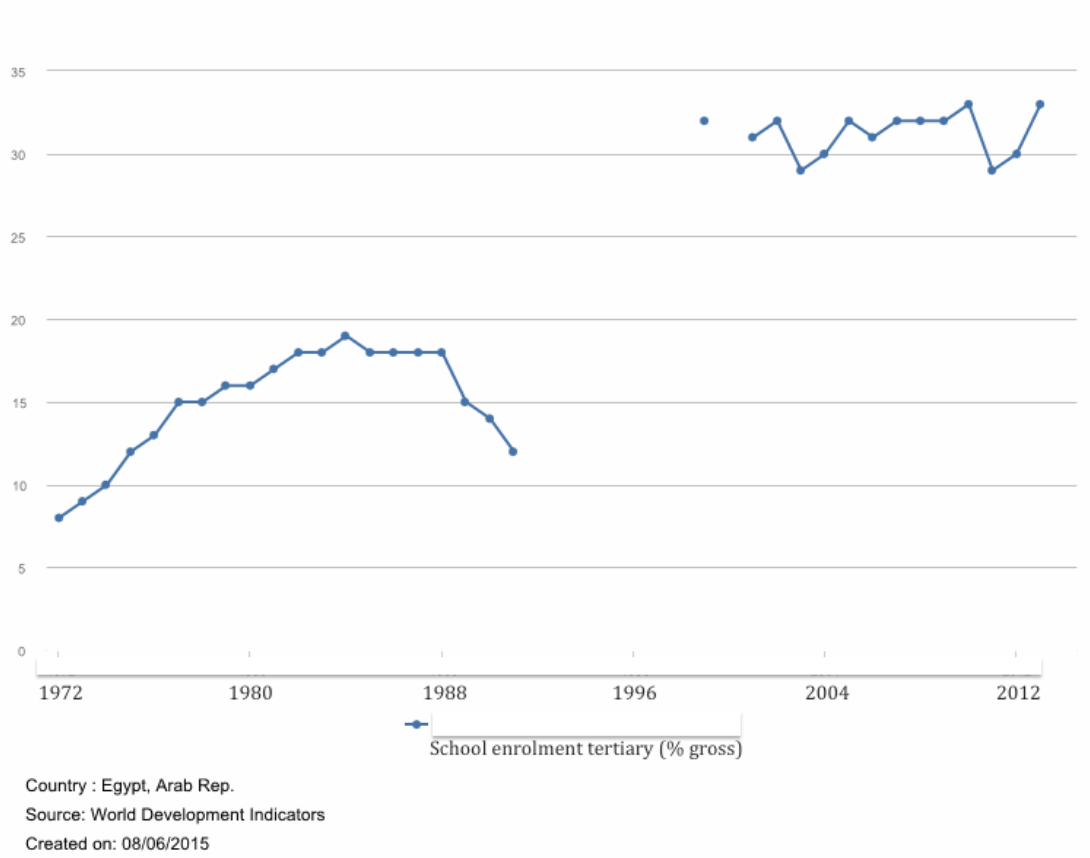

Figure 3: Higher Education Enrolment (1972-2013)

It is worth noting that there were two leaps in enrolment growth in last four decades, both starting in the aftermath of a war: the first leap started after the 1973 Arab-Israeli war and is associated with the expansion of the number of public universities in the 1970s. Seven public universities were established

during the period from 1972-76, in addition to upper-intermediate technical institutes (World Bank, 2002). The second leap started after the 1991 Gulf War and was associated with the establishment of private universities in the 1990s and their subsequent expansion.

2.5. Summary

Within the context of socioeconomic, political and cultural aspects, there are key issues of relevance to higher education in Egypt that may have a considerable impact on the direction of the desired reform. Despite the rise in the budget allocated for higher education in the recent constitutional amendments, the increase is still relatively low, bearing in mind the dramatic economic inflation in Egypt since the January 2011 revolution and the inherited egalitarian policies of free higher education from the 1952 Revolution.

The last three decades witnessed dramatic sociocultural changes in Egyptian society, such as the emergence of radical religious movements, the decline of the Arabic language and the deterioration of the quality of education, that are due to the change in the social structure and to a rapid rate of social mobility. Within the current political divide in Egypt, the dualism of the education system, among other aspects, may damage the social fabric even more.

CHAPTER 3

3. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

3.1. Introduction

The previous chapters provided an overview of the Egyptian education system with a focus on higher education within the context of the Egyptian cultural, socio-economic and political context. This chapter is concerned with reviewing the literature and developing a conceptual framework.

Reviewing the literature on education research may be considered to be more sophisticated than other fields due to the complicated nature of research problems as well as the challenge of communicating the research aspects with a diverse audience, with various standards of shared knowledge and methodologies (Boote and Beile, 2005). However, the audiences in this case are the supervisors, examiners and the wider scholarly community within this area of study, and therefore more limited.

The literature review demonstrates and ensures the 'research-ability' of the research topic. The aims of research therefore need to clearly link to the reviewed literature (Hart, 1998). Utilizing previous research and building on the topic is essential for the scholarship and integrity of my research. Thus, the literature review is indispensable in constructing the foundation on which my research can be erected and positioned within a wider context of the research area in a sound theoretical framework where the research problem is defined and rationalised, and consequently the scope of research is delimited accordingly.

The literature review is organised according a concept-centric approach rather than an author-centric approach that is less suited for synthesising the literature (Webster and Watson, 2002). This literature review covers the role of higher education, the reform of higher education, higher education for a knowledge economy, and international organisations and higher education in the less developed countries. These themes ultimately shaped the framework of the discussion in order to associate the findings to the claims made in the literature

(Randolph, 2009).

The review is concerned with assessing the claims made in the literature in terms of their significance and to what extent they were credible based on the utilised research methods. Furthermore, the overall assessment of claims has made it possible to identify the knowledge gaps as well as other perspectives as explained in section 1.3 ('Rationale and Significance of Research').

In reviewing the relevant literature, this chapter seeks to address the conceptual relation between knowledge economy and knowledge society as a framework for reforming higher education, in accordance with identified topics that are directly related to both knowledge economy and knowledge society. This includes investment in higher education and the commercialisation of higher education. It then reviews the development of the university's role within the context of public good and the production of knowledge, and reflects on the reform models. Subsequently, it looks at the internal logic of international organisations proposing reforms in the field of higher education in less-developed countries. This chapter also presents an overview of previous reform initiatives, including the invitation to the OECD to evaluate and propose a reform plan for higher education in Egypt and whether officials in post-revolution Egypt (25th of January 2011) share the same views as their predecessors. In order to adequately comprehend the Egyptian case, it was necessary to also discuss academic views on higher education reform in Egypt. The literature review concludes with the conceptual framework for this study.

3.2. Definitions, Concepts and Characteristics

According to the OECD (1996, p.9), "*the term 'knowledge-based economy' results from a fuller recognition of the role of knowledge and technology in economic growth. Knowledge, as embodied in human beings (as "human capital") and in technology, has always been central to economic development*". By the same token, Drucker suggested that knowledge is now becoming the core element of production, marginalizing both capital and labour (cited in Smith, 2002).

The OECD defined 'knowledge-based economy' as an economy that is *"directly based on the production, distribution and use of knowledge and information"*

(OECD, 1996, p. 7). One can argue that economy is always driven by knowledge. Smith (2002, p. 8) indicated that *"all economic activity rests on some form of knowledge, not only in our society but in all forms of human society"*. In other words, the knowledge-based economy is not a 'new economy'. However, in modern-day society economic activities rely on explicit knowledge (generated, codified, accessed and utilised with technological advancement) through education and training, rather than tacit knowledge in past human societies. David and Foray (2002, p.4) pointed out that the use of the term 'knowledge-based economy' signified *"a change from the economies of earlier periods, more a "sea-change" than a sharp discontinuity… the crux of the issue lies in the accelerating (and unprecedented) speed at which knowledge is created, accumulated and, most probably, depreciates in terms of economic relevance and value. This trend has reflected, inter alia, an intensified pace of scientific and technological progress"*. In distinguishing between knowledge and information, they argued that "*Knowledge - in whatever field - empowers its possessors with the capacity for intellectual or physical action. So what we mean by knowledge is fundamentally a matter of cognitive capability*". Knowledge is precisely what enables us to "*orient ourselves in thought*" (UNESCO, 2005, p.47).

Chen & Dahlman (2005, p.6) consider knowledge to be the key engine of economic growth. Hence, they define the Knowledge Economy as *"an economy where knowledge is acquired, created, disseminated and used effectively to enhance economic development"*.

Cooke & Leydesdorff (2006) point out that 'knowledge' as a core component from an economic perspective is not a new idea. They cite Schumpeter who in 1911 was the first to recognise the importance of knowledge in the economy when he referred to 'new combinations of knowledge' at the heart of innovation and entrepreneurship. However, the concept of a knowledge-based economy was first used on a wider scale in a 1995 document written by the Canadian delegation to the ministerial meeting of the OECD Committee on Science and Technology Policy (Godin, 2006).

A revised version by OECD defines a country with a knowledge-based economy as one where "*the production, diffusion and use of technology and*

information are key to economic activity and sustainable growth" (OECD, 1999 cited in George, 2006, p.590). Along same line, the Asia-Pacific Economic Cooperation defined a knowledge-based economy as an economy where *"the production, distribution and use of knowledge is the main driver of growth, wealth creation and employment across all industries"* (APEC, 2000 cited in Hwang & Gerami, 2006, p.102). A knowledge economy was also defined as "*one where the generation and exploitation of knowledge plays a predominant role in the creation of wealth*" (ANTA, 2003a cited in Andrews, 2004, p.1).

A perspective that differs from the OECD's revised definition of knowledge-based economy deems economic growth in modern economies to be driven by the exploitation and use of knowledge in all production and service activities, not just those classified as 'high-tech' or knowledge intensive (Andrews, 2004). Smith (2002, p. 36) has a similar view, stating *"that knowledge creation is a sectorally distributed, economy wide process, not dependant on R&D".* Moreover, he related the knowledge economy to a wider concept of knowledge society rather than the conventional definition that associates the knowledge economy with high-technology industries. Also, Sheehan and Tegart assert that the term 'Knowledge Economy' refers to the overall economic structure, not knowledge intensity, globalization or a combination of both phenomena (cited in Hwang & Gerami, 2006).

Cooke & Leydesdorff (2006, p.5) raise the issue of the synonymous use of knowledge economy and knowledge-based economy. They argue that 'knowledge economy' is the older of the two concepts, going back to the 1950s, with a main focus on the composition of the labour force. However, the term 'knowledge-based economy' has later *"added the structural aspects of technological trajectories and regimes from a systems perspective".*

Andrews (2004, p.1) stated that "*there is no internationally recognised framework for measuring the extent to which an economy is knowledge-based*". Chen & Dahlman (2005) demonstrated the World Bank's framework for the knowledge economy and the associated benchmarking tool (the Knowledge Assessment Methodology). This tool measures the knowledge economy through 14 basic standard variables, and has a cross-sectoral approach which allows a holistic view of the wide spectrum of factors relevant to the knowledge

economy. The framework holistically encompasses education and training, innovation and technological adoption, the information infrastructure, and a conducive economic incentive and institutional regime. By the same token, measuring the economic and social benefits of higher education, including universities, is challenging. Hence Morgan and White (2014b, p.41) believe that "*the public debate on the value of higher education institutions needs to include a more holistic consideration of the economic and social benefits that they produce; and how these are affected by the changes witnessed in recent decades*". However, an assessment methodology to measure the impact of higher education on economy and society will benefit from further research.

It seems that no definition has captured all characteristics of the knowledge economy or defined it in way that would allow it to be measured and quantified (Brinkley, 2006). Smith (2002, p. 38) stated that *"(the) weakness, or even complete absence, of definition is actually pervasive in the literature"* and rooted the definitional problem in the reluctance to consider what knowledge is in epistemological or cognitive terms. Hence these definitions do not reflect the cognitive content of knowledge. However, for the purpose of this study, the knowledge economy is understood to be an economy that is globally influenced by the generation and utilisation of procedural knowledge for economic growth. This definition sums up the characteristics of a knowledge economy in the previously demonstrated definitions, and highlights the fact that knowledge economy is an integral part of a wider global knowledge economy where knowledge is knowledge-in-action (procedural knowledge) that is validated by usefulness and embedded in its situation rather than existing separately (propositional knowledge) (Gibbons, Limoges, Nowotny, Schwartzman, Scott, & Trow, 1994). This mode of knowledge directly challenges the university role as the authority in the creation, validation and dissemination of knowledge (Williams, 2007) (see Section 3.4.2, 'Production of Knowledge').

Andrews (2004) sidestepped the discrepancies between knowledge economy definitions, to focus instead on the characteristics of the knowledge economy and the inter-related terms such as knowledge work, knowledge workers and knowledge organisation. He noted an increasing significance of knowledge workers in international contexts where 'globally advantaged' occupations are

more likely to be in demand in the job market, as well as an increasing tendency towards learner-centred learning and self-directed or heutagogical approaches to learning.

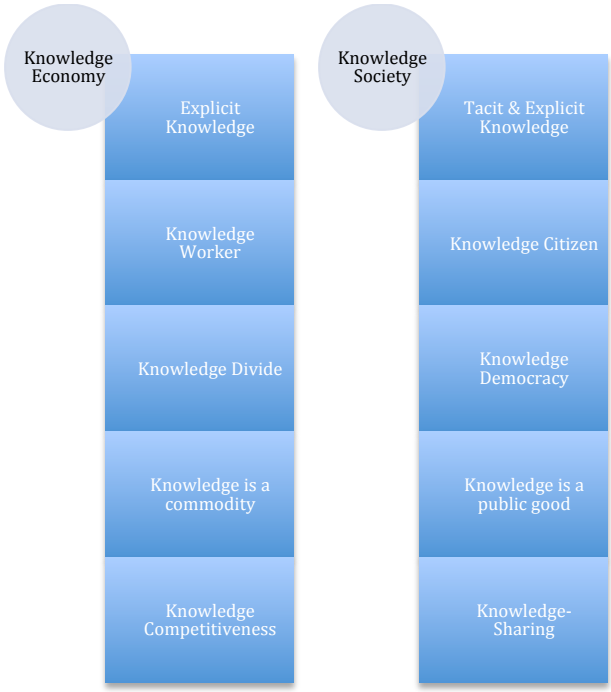

Figure 4: Characteristics of Knowledge Economy vs. Knowledge Society

Foray (2004 cited in Scott, 2005) argues that the combination of greater investment in knowledge-related activities and the rapid advances in information and communication technologies (ICT) are the two events responsible for the present configuration of the knowledge economy. The collision of these two events has led to two exceptional characteristics: the acceleration of knowledge production and a radical reduction in the costs associated with the manipulation, storage, and transmission of large quantities of information, as well as the acquisition of knowledge. By the same token, Mongkhonvanit (2008) referred to the rise of knowledge intensity and globalization of economic activities as the main factors for the emergence of a knowledge economy. However, she stressed that the ICT revolution has impacted every aspect of the economy from R&D to distribution through production and marketing, rather than simply focusing on certain products or industries.

3.3. Higher Education for Knowledge Economy

Governments worldwide have come to acknowledge the greater role of higher education as a key driver in the knowledge economy. This recognition has been reflected in venture partnerships between universities and industry and business, as Olssen & Peters point out, as well as initiatives that have been launched to promote entrepreneurial skills, and the development of "*performative measures to enhance output and to establish and achieve targets*" (2005, p.313).

An educated and skilled population to create and utilise knowledge well is a legitimate goal for development. However, the model for the reform of higher education proposed by international organisations such as the World Bank and OECD, is mainly developed within the limited context of knowledge economy. Not only is it to be implemented by economic means, by managing the cost of higher education through the control of its inclusiveness, and the extent to which it is a public good or a private good, it is also driven by economic considerations, in terms of its purpose, namely a stronger economy, whether at public or private good level. This study explores the current role of higher education whose primary concern has become qualifying students for the job market as the main context for any proposed reform. It is also exploring a model for reforming higher education in a wider context of knowledge society that is society-centric, while preserving the current role of qualifying students for the job market. This model would enable students to embody the shared values of their society and at the same time the values of international norms.

Two major interlaced features of higher education for a knowledge economy have been identified, namely investment and commercialisation, that are directly associated with the political and economic agenda, and massification of higher education.

3.3.1. Investment in Higher Education

The economic perspective on education was already present in the economic and production management literature when Drucker (1969) stated that ''*Education has become too important to be left to educators. (...) Education is far too big a cost to be accepted without questioning to ask whether it is fruitful*

investment or simply expense is a legitimate question''(cited in Simons, Haverhals & Biest, 2007, p.396).

George (2006, p.590) describes investment in knowledge within the framework of knowledge economy as "*investment in areas that generate knowledge, such as research and development, software, education and basic science*" as well as "'*innovation' and the machinery, equipment and infrastructure to support it*". On the other hand, Chen & Dahlman (2005, p.7) point out that "*a well-educated and skilled population is essential to the efficient creation, acquisition, dissemination and utilization of relevant knowledge, which tends to increase total factor productivity and hence economic growth*".

The most recent changes in Egypt's constitution of 2014 reflect a commitment by the state to increase the allocated fund for higher education to at least 2% of the Gross National Product (GNP), to be increased gradually to reach international standards. However, while this raise is likely to meet the growing demand for higher education, it does not guarantee the quality of education and relevancy to job market.

Economic growth, in addition to global competitiveness and improved social conditions were often used to justify significant public sector investments in education (Kozma, 2005). A case in point is the public investment in education in East and Southeast Asia between 1965 and 1990, which grew faster than in any region in the world, and which enabled the region to have the highest performing economies of recent decades (George, 2006). Chen & Dahlman (2005) confirm that a country's human capital is an essential ingredient for achieving growth, regardless of the underlying model of reform, whereas Morgan & White (2014b) state that higher education must continue to qualify graduates for the job market, which is economically and socially rewarding, while maintaining the quality, relevance and social importance of higher education. The quality of human capital is critical for an economic growth that includes, but is not limited to, the ability to adapt newly produced knowledge for the global market and to contribute through innovations. Indeed, the quality of higher education and relevancy to job market are key to economic growth. However, there is little information on how higher education in Egypt is perceived among students and academics in terms of the quality and relevancy

to the job market, and whether these are top priorities for higher education reform.

From a different perspective within the context of the cluster-based economic development model, Ketels & Memedovic (2008) believed that the key role of universities is to generate knowledge and to transfer knowledge to regional firms and their workforces to pursue their role as parts of clusters and as engines of regional business development and economic growth. Thus, investments in universities should be allocated to a specific cluster. This approach may be appropriate in a wider national strategy for a less-developed country in terms of sharing resources and promoting research for local needs.

Despite the evidence provided that indicates a strong association between investment in higher education and R&D on one side, and economic growth and social development on the other side, the World Bank pointed out that investment in higher education and R&D needs to be planned in a wider and nationally-appropriate macroeconomic framework in order to achieve the required benefits. However, the majority of the less-developed countries do not have development strategies that link the application of knowledge to economic growth or even a national strategy for science and technology (World Bank, 2002).

Extensive investment in higher education and research and development may not be feasible for the less-developed countries when compared to the member states of the Organization of Economic Cooperation and Development (OECD) "*which are responsible for 85 per cent of all R&D expenditure in the world, while China, India, Brazil and the Asian Tigers are responsible for 11 per cent. The rest of the world accounts for the remaining 4 per cent*" (World Bank, 2002 cited in Jibril, 2004, p.134). Giving the limited financial resources, this may suggest that the less-developed countries should invest extensively in training and vocational education while maintaining reasonably high quality university education, since increasing and advancing world expenditure on R&D may not have a direct benefit to the economic growth of these countries. The questions that need to be answered prior to reforming higher education in Egypt are: what is the investment strategy in higher education in Egypt? Is it a prerequisite for reforming higher education? Would investment in R&D be one of the priorities

for higher education reform?

Looking at the bigger picture, the UNESCO report (2005) raises the question of whether, given the large investments that the developed countries have made to enter into the knowledge economy, as well as the current extent of the digital and knowledge divides and the persistence of development gaps, the less-developed countries have a hope of achieving the same. Interestingly, the UNESCO's communiqué of the 8th July at the 2009 World Conference on Higher Education put all the financial responsibilities for supporting higher education on governments since higher education is a public good according to the UDHR. Maintaining equal accessibility to all for higher education on the basis of merit it is not necessarily associated with economic support.

> "*As a public good and a strategic imperative for all levels of education and as the basis for research, innovation and creativity, higher education must be a matter of responsibility and economic support of all governments. As emphasised in the Universal Declaration of Human Rights, 'higher education shall be equally accessible to all on the basis of merit' (Article 26, paragraph 1)*" (UNESCO, 2009a, p.2)

This may encourage some governments in less-developed countries that are not yet prepared for such a commitment to resort to the privatisation of higher education on a large scale without having an articulated national strategy for higher education or even a regulatory framework, in order to avoid the economic, social or political consequences. This may increase polarisation in society, not only in terms of the economic, social or knowledge divide but also the political divide that is already increasing in Egypt between the Islamists and their supporters (a considerable portion of society) and the rest of the nation. It is conceivable that in Egypt, opening up to private higher education without a proper strategic plan may for example attract huge investments from fundamentalist Islamic organisations to establish private universities for their followers (see Section 2.3, 'Cultural Context'). Investing in higher education on the basis of economic considerations, leaving aside other considerations such as social and political considerations may have a devastating impact or in a best-case scenario deviate from the anticipated results of the reform of higher education.

3.3.2. Commercialisation of Higher Education

Due to the growing numbers of students, universities have found themselves under pressure to seek private sector funding. This has contributed to the "*tendency to treat knowledge as a commodity, which, in turn, has led to the 'commodification' of higher education*" (Simons et al., 2007, p. 397). As regards the commercialisation of research on the other hand, Nowotny, Scott & Gibbons (2003) argue that it could be seen as a threat to scientific autonomy and to scientific quality but that it can also be seen in terms of its priorities, cost and feasibility to the market. Viable research would be more relevant to the development needs of less developed countries.

The UNESCO report (2005) points out that countries with a long university tradition are less threatened by the 'commoditisation' in the field of higher educational and the diversification of higher educational provision. Countries with a less established tradition of higher education, on the other hand, are most at risk of commoditization, and the emergence of full-scale markets in higher education, which could lead to a distortion of the original missions of universities. In Egypt, this would raise questions on how students and academics perceive higher education, especially private higher education, on the conception of the role higher education, and on whether the perceived role is similar to the assumed role of higher education in the model proposed by the OECD.

The World Bank (2002) demonstrates that criteria such as graduate satisfaction, level of funding from outside sources or the benchmarking of universities against each other should determine the funding received by universities. George (2006) however suggests that despite worldwide pressure to encourage a market among universities, this is not always the most efficient use of resources, or the best way for universities to contribute to economic growth.

The UNESCO report (2005) notes that the privatisation of higher education has given rise to new actors, such as commercial-style universities driven by profit, as well as virtual universities, which could have more students by the year 2020 than traditional universities that require a physical presence in the lecture hall. Would the commercial-style and virtual universities share the same role as traditional universities? It may be challenging for the higher education reform

plans in Egypt to produce a consensus over the role of universities and to maintain this role in private higher education. Identifying the current conceptions of the role of universities among stakeholders would be essential for the framework of higher education reform in Egypt.

The UNESCO report (2005) goes on to remark that the developing countries have been reduced to the role of consumers and easy target in the global higher education market. UNESCO expects these countries to find themselves facing the same dilemma of commoditization experienced by the developed countries without the benefit of having strong established institutions that could help to frame balanced policies with regard to the funding of higher education.

According to Chen & Dahlman (2005), sustained economic growth requires successful strategies, which involve the sustained use and creation of knowledge. They distinguished between two levels of development: At lower levels of development, and hence lower levels of science and technology capability, knowledge strategies are restricted to adopting global knowledge and adapting foreign technologies to local conditions. At higher levels of development, and hence higher levels of science and technology capability, knowledge strategies involve innovation and the production of high value-added products and services.

It should be noted, however, that the recommendation by the World Bank (2002) for the less-developed countries to encourage a market among universities will lead to the domination of commercial-style universities, for which (as observed above) applied knowledge is more important than the production of new knowledge. It may therefore not be conceivable for a less-developed country to have a chance to adopt a higher-level knowledge strategy.

The UNESCO report (2005) confirms that the global economy now places greater value on design (which is fundamentally aligned with R&D and patenting) and prescription (marketing and communication), which makes it more difficult for developing countries to catch up with the more advanced countries.

It appears that the reform of higher education in the context of the knowledge

economy may demote the developing countries to the rank of mere consumers of global knowledge, since it will be impossible for them to compete in design and prescription, due to their lower levels of development.

3.4. Role of Higher Education

3.4.1. The Public Good

According to Simons et al. (2007), universities have expressed concern at the fact that the economic agenda has been given priority over considerations such as institutional autonomy, cultural and social responsibility, public funding, and the public role of higher education. The need for employability in the knowledge economy has affected the public role of the university, which has changed from providing an orientation for society to responding to society's needs. This is what underwrites the usefulness of the teaching function of universities.

In the early 19th century, von Humboldt had argued that universities should be led by an ethos of 'Wissenschaftlichkeit' (scholarship), which is aimed at the pursuit of truth and ''*the grasping of reality in its totality*''. Von Humboldt believed that freedom from external intervention would not result in a university that is disconnected from wider social and political concerns, as this pursuit of truth would result in the enlightenment of the individual, society, the state, and mankind as a whole (cited in Biesta, 2007, p. 469).

Delanty (2002) suggested that universities should become agents of the public sphere initiating social change, rather than sites of exclusive expertise, which simply respond to social change. Similarly, Giroux believes that Higher Education is a *"vital public sphere for critical learning, ethical deliberation and civic engagement''* (cited in Biesta, 2007, p. 470).

Traditionally, higher education has been considered a public good as well as a major contributor to other public goods, such as democracy and good governance (Tilak, 2008). This conventional view of higher education as a public good has been associated with the Universal Declaration of Human Rights (UDHR) of 1948, whereby everyone has the right to free education at least at the basic stages, and higher education should be equally accessible on the basis of merit. The UDHR was followed by "*the 1966 UN Covenant on Economic, Social and Cultural Rights* (that) *is the most important treaty in this*

area" (Morgan & White 2014b, p. 39). It stated that higher education: "*shall be made equally accessible to all, on the basis of capacity, by every appropriate means, and in particular by the progressive introduction of free education*" (Assembly, 1966, p.5).

The continuous debates since the European Commission report of 2003 on the public role of European universities and the reform of higher education were not primarily concerned with reform in the less-developed countries but mainly dedicated to developed countries, understandably from different perspectives than those that would be appropriate for the less-developed countries, as they re-question the role of the university within society in the light of the emergence of the knowledge economy, including purposes and continuing autonomy in a more complex and interconnected world (Williams, 2007).

Since neo-liberalism gained momentum, universities have been struggling to define their fundamental role on a continuum between higher education as a special human right and higher education as an investable commodity, and consequently there is uncertainty in society about the role of universities. Would universities be able to maintain their social and cultural role within the context of the privatization of higher education (Morgan & White, 2014b)? This question will be answered within the context of Egyptian higher education in the discussion (chapter 6). However, under the social and economic pressures there is reason to suspect that considering higher education as an investable commodity may gradually supersede higher education as a human right. On the other hand, the concept of public goods is associated with the dominant role of the state that has declined in recent decades from the provision of goods and services to regulating higher education and ensuring its quality, relevance and inclusiveness. Hence, meeting these criteria is considered the key for the public good whether HEIs are public or private (Bergan, 2005).

Williams (2007, p. 511) points out that the economic impacts of globalisation and the massification of higher education markets have resulted in a fractured higher education system, with less-adaptable universities consigned to a shrinking public-funded sector, and the more enterprising universities developing commercial partnerships in e-learning and knowledge transfer. In Chapter 5, I will look at how a similar phenomenon has impacted the Egyptian

higher education system, where private universities have sprung up in the absence of an adequate regulatory framework, with resulting consequences on society and the role, which universities could do in Egypt. Morgan and White (2014b, p.41) maintain that "*(there) is a necessity to reconcile society, state and market to achieve both efficiency and social justice in economic and social development. This includes the role, organization and provision of higher education*".

Peters (2001) maintains that a reflection about the public role of universities today must necessarily take into account both concepts of ''knowledge economy'' and ''knowledge society''. In other words, the balance needs to be found between the economic agenda and the enlightenment of society. Hence one of the research questions investigates the role of universities in Egypt, since the definition of the university role has a great impact on identifying the nature and characteristics of the desired reform, which is the overall aim of this study. The conceptual framework (Section 3.9) illustrates the conceptual balance of the university's public role on the 'Society' dimension and in relation to other dimensions (i.e. 'State' and 'Market').

3.4.2. Production of Knowledge

In order to identify the framework within which the reform of higher education needs to be developed, it has been crucial to understand the relation between universities and the production and dissemination of knowledge. The UNESCO report (2005) distinguishes between traditional universities, which are mainly motivated by considerations of academic prestige and which are interested in applied knowledge more than the production of new knowledge, and commercial-style universities, which are mainly aimed at making a profit.

Simons et al. (2007) identified two views of the production of knowledge: the extreme view sees it as a new kind of industry based on ICT, where knowledge is a commodity and higher education hence appears as a capital investment. The moderate view sees the production of knowledge as a transition from the industrial to the post-industrial economy that is based on social forces rather than simply ICT. In the same vein, Delanty (2002) emphasized that knowledge is now shaped by various social forces seeking to challenge the truth, rather

than a goal to be pursued by scholars outside society. Hence, Stehr argued that the notion of a 'knowledge economy' is too narrow and suggested the 'knowledge society' as a framework (cited in Simons et al., 2007).

Looking at knowledge production in terms of modes of knowledge, Gibbons et al. (1994) distinguished between: Mode 1 knowledge being typically the traditional knowledge of subject disciplines: propositional in form, validated by peer scrutiny and disseminated in an academic environment; while Mode 2 knowledge is knowledge-in-action or problem-solving knowledge: procedural in form, validated by utility and embedded in its situation rather than existing separately (cited in Williams 2007). In fact, this mode directly challenges the monopoly of the university as the only authority in the creation, validation and dissemination of knowledge (Williams 2007). However, these two modes of knowledge production can be seen in a wider context of knowledge creation, the SECI model (socialization, externalization, combination and internalization) proposed by Nonaka, Toyama & Konno (2000) who postulate four modes of knowledge creation based on the interaction between tacit and explicit knowledge.

Socialisation (tacit to tacit) "*is the process of converting new tacit knowledge through shared experiences in day-to-day social interaction*".

Externalisation (tacit to explicit) "*is a process whereby "tacit knowledge is articulated into explicit knowledge…so that it can be shared by others to become the basis of new knowledge*".

Combination (explicit to explicit) "*is a process whereby "explicit knowledge is collected from inside or outside organization and then combined, edited, or processed to form more complex and systematic explicit knowledge…the new explicit knowledge is then disseminated among the members of the organisation*".

Internalisation (explicit to tacit) "*is a process whereby "explicit knowledge created and shared throughout an organization is then converted into tacit knowledge by individuals…This stage can be understood as praxis, where knowledge is applied and used in practical situations and becomes the base for new routines*" (Nonaka, Toyama & Konno, 2000, p.9).

The role of the university as the established knowledge producer is disputed. Scott (cited in Williams 2007, p. 518) predicted that educational content would increasingly separate from its delivery, with a weaker role of universities, the "*custodians of propositional knowledge*", and a greater exploitation of vocationally-oriented procedural knowledge.

Generally, valid knowledge is in the process of being redefined, due to the erosion of the process of disseminating just-in-case propositional knowledge (Mode 1), and the rise in just-in-time procedural knowledge (Mode 2), recognised by a massified and technologically sophisticated higher education market (Williams, 2007).

Given the overwhelming social, economic and political problems that less-developed countries face, Gray & Burke (2008, p.255) argued that *"the major need is for the production of locally relevant research to be effectively disseminated in order to have maximum impact where it is most needed".* This approach calls for the production of Mode 2 problem-solving knowledge, which globally has now been occurring outside the realm of universities. However, due to the fact that less-developed countries do not have the capacity to produce knowledge outside of universities, this could present an opportunity for universities to adopt Mode 2 knowledge in a country such as Egypt.

On the other hand, both Mode 1 'propositional knowledge' and Mode 2 'procedural knowledge' are falling within the 'Combination' mode of the SECI model for knowledge creation. Adopting the four modes of the SECI model, will diversify the university role among economic, political, social and cultural aspect as well as boost its social and cultural role in the society for public good. The role of the university in terms of producing and disseminating knowledge would encompass producing locally relevant research, a platform for societal debate, sharing knowledge and societal values, and preserving tacit knowledge in a global context. Furthermore, utilising the knowledge society dimension of 'Shared Context' (Ba) for knowledge creation (see Section 3.8, 'Knowledge Economy and Knowledge Society Frameworks') would balance the inevitable expansion of private higher education along with the associated commercialisation issues.

Within the context of the study's definition of knowledge economy as an

economy that is globally influenced by the generation and utilisation of procedural knowledge for economic growth, (see Section 3.2, 'Definitions, Concepts and Characteristics'), the knowledge economy framework for reforming higher education is concerned with sustainable economic development, whereby education and research are economically oriented. Considering the model for the reform of higher education in Egypt, the role of higher education needs to be identified and articulated in a wider national development plan that includes social and cultural development as well. Hence the research question of 'What is the role of higher education in Egypt?' has pivotal role in the reform model.

3.5. International Organisations and Higher Education in the Less-Developed Countries

King (2011) reflects on globalisation in higher education, which in recent years has manifested itself through stronger ties and wider interaction between individuals, institutions and states, and imposed an internationalisation and synchronisation of policies and models. He points to the dominance and influence of international organisations such as the OECD, the WTO, the EU and UNESCO in imposing models and ideas related to higher education. He notes that the adoption of common models, or of policies and decisions initially made by other states, can lead to isomorphism which can present both constraints and opportunities for the adopting country.

Isomorphism is most likely to present constraints when applied to less-developed countries, since the model was designed in a different socioeconomic and cultural setting. This may raise the question of the prerequisites for reforming higher education in Egypt to establish a similar socioeconomic and cultural setting, which allows for the adoption of the model proposed by IGOs (e.g. OECD). Collins & Rhoads (2010, p. 203) stress the need to hold the World Bank and other international development organizations more accountable, especially with regard to their proposed one-size-fits-all models and for the damage caused by faulty policies in the past (e.g. in Uganda).

In the early 1990s, the World Bank had emphasized the need to strengthen

primary and secondary education in developing countries, considering these to be most appropriate to the stage of economic development (George, 2006). As a result, for decades the Bank undervalued the role of higher education in these countries and concluded that they were too far behind to compete in knowledge production, and neglected to support their research capacity (Collins & Rhoads, 2010).

In its 2000 report, however, the World Bank reviewed its policy framework for higher education: "*Tertiary education institutions support knowledge-driven economic growth strategies and poverty reduction by (a) training a qualified and adaptable labour force [...]; (b) generating new knowledge; and (c) building the capacity to access existing stores of global knowledge and to adapt that knowledge to local use. Tertiary education institutions are unique in their ability to integrate and create synergy among these three dimensions*" (cited in George, 2006, p. 599).

Collins and Rhoads (2010) wonder how the World Bank's econometricians have never taken the trouble to calculate the financial damage done to developing nations by under-supporting higher education, or to provide a convincing explanation for the fact that higher education systems of developing countries are dilapidated and over-crowded, other than repeating the well-known fact that corruption abounds in these countries. Further explanations would probably lead them to acknowledge that tailor-made reform models are needed, rather than the one-size-fits-all models provided.

Collins and Rhoads (2010) conclude from the above that the Bank has played a key role in producing the sorry state of affairs of universities in the developing world today. They describe the relationship between the Bank and universities in the developing world as both neo-colonial (conveying the global hegemony by the powerful nations and their institutions) and neoliberal (an economic ideology which seeks to align weaker nations with global trade initiatives) (Collins & Rhoads, 2010). Various critical scholars, according to Collins, have highlighted the fact that IGO programmes and policies often *"seem to advance the interests of wealthier nations, while claiming to support developing nations"* (Collins & Rhoads, 2010, p.184). However, identifying the priorities of higher education reform for a certain developing country would help adjust the IGOs'

programmes to meet the country's specific needs. Hence, recognising the higher education reform priorities for Egypt would contribute to identify the characteristics of tailor-made reform model.

Marginson (2007) pointed out that higher education within the nation is considered as a public good and associated with the state, whereas cross-border higher education is considered as a private good and associated with the market. From a wider perspective, Stiglitz (1999, p.320) asserted, "*that knowledge is one of the keys to development and that knowledge is complementary to private and public capital. Knowledge is a global public good requiring public support at the global level*". In the same respect, Marginson (2007, p. 331) believes that "*global public goods in higher education are the key to a more balanced, globally friendly, 'win-win' worldwide higher education environment, in which the contribution of higher education to the developing world is enhanced*". Enhancing access to the global public good and building higher education capacity in the less-developed countries will expand circulation, reception and production of knowledge globally. This may suggest that the role of international organisations towards less-developed countries needs to be redefined within the framework of knowledge as a global public good for a wider enlightenment, which will not only reduce developmental gaps but also cultural gaps.

3.6. Historical Overview of Higher Education Reform

3.6.1. The Official Version of the Reform (MoHE)

Abd Al-Hamid, Saad, Gomma, Kalifa & Gadalah (2010) recount the efforts made by Egypt to deal with the challenges in harnessing its education system in service of its development plans. In 1997, the MoHE established a national committee for reforming higher education to address the challenges and set education strategies (OECD, 2010). The committee organised a seminar on higher education reform in June 1999 for consultation with national and international subject matter experts as well as World Bank experts. In June 2000, a national conference for reforming higher education was organised to announce a reform strategy for higher education up to 2017 (MoHE, 2000). The major objectives of this reform strategy were: "*First, developing a*

comprehensive and sustainable human resource, comprising scientific, technical, cultural and ideological traits. Second, utilising scientific research and developing capacities. Third, maximizing the role of HEIs as cultural and educational centres. Fourth, comprehensive administrative reform of HEIs and integration of principles of total quality and sustainable development. Fifth, Developing the education system and bylaws to allow for sustainable and life-long learning systems" (HEEP, 2010a). According to Helal [3] (2008), the government subsequently endorsed Implementation Plan I (2002-2007), which covered six major fields resulting in 12 reform projects. In 2006 an update was made to the national reform plan to include a higher education master plan for 2007-2022, system governance, legislation structure and Implementation Plan II (2007-2012).

The Egyptian higher education reform strategy included 25 reform projects, to be implemented over three phases between 2002 and 2017. These included the following implemented projects:

- The Higher Education Enhancement Project Fund (HEEPF)

- The Information and Communication Technology Project (ICTP)

- The Egyptian Technical Colleges Project (ETCP)

- The Faculty of Education Project (FOEP)

- The Faculty and Leadership Development Project (FLDP)

The summary of the aims of these projects (phase I of the reform plan) reflects how the decision makers perceive the reform of higher education and the priorities of this reform:

- Creating a competitive environment for HEIs and supporting their autonomy and decentralisation,

- Raising the efficiency of universities' information infrastructure, and linking universities to the Egyptian universities network at the Supreme Council of Universities (SCU) and to the national network for scientific research,

- Decentralisation of management of middle technical institutes, and the

3 Ex-Minister of Higher Education, Egypt.

development of their human capacities and physical resources, and supporting them in becoming accredited training centres,

- Developing faculty of education members in order to completely modernise these faculties in line with international scientific and professional practices,

- Enhancing institutional and professional of human resources within HEIs and enabling leaders to deal with competitive environments.

Neither the strategy nor the plan appear to provide evidence-based justification for the reform or, obviously, the reform priorities, due to the lack of consultation with stakeholders (academic and student) and the absence of societal debate on the reform subject. Both the strategy and the plan have been developed in isolation from the social, cultural, economic and political context. The strategy and the plan have not considered how stakeholders perceive higher education or reflect on the reform priorities, and if there are prerequisites for reforming higher education.

It appears that the Egyptian government's reform programmes encountered problems and uncertainties, or had little impact on the ground, leading the Egyptian government to invite the OECD and the World Bank to review the higher education system and present options for immediate and long-term policies towards reforming higher education, which were submitted in April 2010 (OECD, 2010).

Following the OECD review of higher education, it was anticipated that a new strategy would replace the 2000 strategy for reforming higher education or at least for the old strategy to be modified to reflect both national and global changes during the past 15 years. However, a state of instability prevailed from the start of the revolution of 25th January 2011, and continued until the issuing of the constitution of 2014 and the election of President Al-Sisi. It was anticipated once again that a new strategy would be developed to reflect the higher education gains in the new constitution, however as yet there is no sign of change. Quite the reverse; the new initiatives of the MoHE reflect solely a political agenda, such as the initiative to establish an e-learning network for African countries, despite Egypt itself not having such a network, in addition to the language barriers and issues such as course material content. This

indicates a conflict of priorities among decision makers.

3.6.2. The OECD Report of 2010

As previously mentioned, the Egyptian government invited the OECD and the World Bank to conduct a review of the higher education system with an aim of reforming higher education. Although the report provides advice and guidelines on the reform of higher education in Egypt, it implicitly states in the Foreword section that the purpose of the review is developing Egypt's human capital, rather than explicitly stating that it is the reform of higher education:

> "*The Government of Egypt invited the OECD and the World Bank to jointly conduct an independent review of the higher education system and to formulate options for immediate and longer term policies towards developing its human capital*" (OECD, 2010, p.3).

The advice and recommendations provided across the report then explicitly referred to the reform of higher education in Egypt rather than developing the human capital aspect of higher education.

The report further dedicated a section for 'Readiness for the knowledge economy: the knowledge economy index', promoting the World Bank framework for a knowledge economy and implicitly recommending positioning the reform to have an impact on the knowledge economy index.

Within the context of this study, the OECD report represents a 'neo-liberal model', whereas the current higher education system in Egypt represents a 'state-centric model'. The models will be discussed further in section 3.7 'Reform Models' and section 3.9 'Conceptual Framework'.

The OECD report recognised the reform efforts already invested since 1997, but it also recommended "*paying particular attention to the immediate need for structural reforms, for more flexibility and efficiency in governance and institutional management, and for increasing the capacity of the higher education system to deliver relevant education to a broader range of students*" (OECD, 2010, p. 4). The report emphasised the urgent need to address these challenges in a timely manner, as they may otherwise impede the development of Egypt's full potential. The examiners' report pointed out that it was prepared against a comprehensive background report (Abd Al-Hamid et al., 2010)

provided by the Egyptian authorities.

The report (2010, p.320) states that there is *"an imperative for fundamental reform of the Egyptian higher education system",* arising from the combination of emerging pressures (such as: the need for Egypt to improve its competitiveness and knowledge-based economy, to provide for a larger student population and to reduce social inequalities resulting from differences in educational opportunity) and accumulated dysfunctions (such as: limited opportunities for students, poor quality of educational inputs and processes, as well as under-developed university research capability and lack of connection to the national innovation system). However, the report neglects to conceptualise the national role of universities in Egypt and to identify the causes of the accumulated dysfunctions within the cultural and social context, rather than simply elaborating on the effects.

The report recommends that Egypt undertake structural reforms to accommodate the growing youth population and student cohorts, by modernising technical and vocational educational institutions and improving their quality, relevance and status, in order to expand enrolment. It calls for an increase in the number of private institutions and making greater use of online and mixed mode learning. Finally, it recommends that research capacity should be built up to become internationally competitive and to become integrated with education within those institutions (OECD, 2010).

The OECD report speaks of a lack of data on the extent to which degree-level graduates in Egypt are able to secure employment, a deficiency which is made worse by factors such as reduced reliance on the public sector as an employer, cultural attitudes towards certain qualifications and jobs, inadequate career guidance for students, the absence of surveys indicating graduate destinations, inadequate analysis of rates of return to graduates, and the lack of engagement between employers and HEIs.

The report highlights a major challenge for Egypt, namely the imbalance between graduate supply (whether of university education, other higher education or secondary education) and the needs of the job market, and the fact that costly university education is disproportionately and indiscriminately favoured over other types of tertiary education (OECD, 2010).

To address this issue, the report recommends that the government work with each individual higher education institution and with national and regional employers, to determine a distinctive mission, scope and focus for each institution, as well as the job market areas for which it prepares its graduates, It emphasizes the need to build the capacity of these institutions to allow them to become more autonomous. The report further recommends providing information about the job market and supply and demand to prospective students, career guidance advisers and the HEIs themselves (OECD, 2010).

The report emphasises the need for greater self-regulation and control to be granted to accredited HEIs, with less public regulation of their activities. However it also calls for a single legal framework covering all HEIs and providers (public, private non-profit and for-profit institutions, technical colleges, foreign institutions, and Open University). Within this framework, a new Supreme Council for Higher Education would be responsible for strategic planning and steering the course of the system, in addition to a range of other functions in line with national priorities. The council would consolidate the current functions of the Supreme Council for Universities (SCU), the Supreme Council for Private Universities (SCPU), the Supreme Council for Technical Colleges (SCTC), as well as those exercised by the MoHE in relation to these institutions (OECD, 2010).

3.6.3. Academic Views on Higher Education in Egypt

Academic literature, whether Western or Egyptian, on higher education in Egypt, and its reform in particular, is not as abundant as one might expect of a pivotal country in the Middle East. Two trends have been identified in the literature, which deal with specific issues from either employment and job market perspectives or pedagogical perspectives, and which may overlap on issues such as the curricula and the relevancy of higher education. However, research that provides a holistic and conceptual approach to higher education in Egypt and its role, or which emphasises social, political and cultural factors, remains limited. Indeed, dedicated literature on the reform of higher education in Egypt and its priorities are severely lacking compared to the literature on reforming higher education in other developing countries such as China.

Zeng (2006) identified three key issues in the higher education system in Egypt: (1) High education expenditures but low efficiency: about 5.3% of GDP in 2000, however, it decreased over the following years, reaching 3.76% in 2008 (see Appendix 9.9); (2) relatively high education enrolment, but low relevancy to the market needs, and overall low educational attainment; and (3) a relatively high number of professional and technical workers but with low quality. This may shed some light on the priorities for reforming higher education in Egypt. However fact that the prerequisites of higher education reform remain unspecified will allow for the vicious circle in Egypt to continue.

Egypt's faces a serious brain-drain problem, with highly skilled individuals leaving to work abroad, and a lack of capacity to repatriate migrants or attract replacements from other developing countries. As in other developing countries, this problem has grown in recent years, and developing countries have been stripped of many vital skills and scientific capacities, particularly in the field of IT and health care (UNESCO, 2005). The main reasons behind the brain drain in Egypt, according to ERAWATCH (2010, p.5), are *"professional dissatisfaction, the gap between what has been learned and what can be accomplished, low income, absence of encouraging R&D environment, shortage of research facilities and poor social benefits for people working in scientific research".* Regardless of the legitimate reasons for the brain drain in Egypt, it is not anticipated that highly skilled Egyptians who work abroad will return and counterbalance the brain drain, since they are often perceived as threat to the current political, economic, social and cultural norms in Egypt. This perception as well as the social and cultural divide among professionals may need to be tackled prior to reforming higher education in its wider context.

Following the 1952 revolution and the elimination of higher education fees, scholars and policy makers assumed that these egalitarian reforms and the ensuing greater participation would promote more inclusiveness, which in turn would result in more social as well as gender equality in higher education (Lewin, 2008 cited in Cupito & Langsten, 2011).

In the face of this belief that expansion promotes inclusiveness, Raftery and Hout (1993), with reference to the Maximally Maintained Inequality (MMI) hypothesis, states that educational inequalities will persist until the most

advantaged socioeconomic groups have saturated their demand for higher education. Indeed, Cupito & Langsten (2011) find that in Egypt, higher education enrolment of students from the wealthiest quintile remained highest, as they were able to maintain their clear advantage. They identified three layers of advantaged students in the inclusive Egyptian system: (1) students who have studied in general secondary schools which prepare students for higher education; (2) students who are able to afford to pay for private secondary education or private tutors that make up for poor quality state schools, and (3) students who are able to pay the costs associated with higher education as well as continuing studies, even while out of work during that time.

Consequently, they state that despite the growth in higher education enrolment in Egypt, inclusiveness levels did not improve for males, and improved only modestly for females, as the share of females, particularly from poorer backgrounds, in higher education has seen some increase.

The January 2011 revolution intensified demands for social equity and for youth unemployment to be dealt with as a matter of socioeconomic priority. The persisting instability however is continuing to obstruct efforts to implement political, economic and social development, including workforce development policies (SABER, 2014).

Cupito & Langsten (2011) refer to a further constraint on greater equality, namely the disproportionate rise in the number of secondary school graduates eligible for higher education, compared to the number of higher education places available (Arum, Gamoran & Shavit, 2007 cited in Cupito & Langsten, 2011). Even the planned increase in higher education enrolment from the current 33% to 40% by 2022 (Helal, 2011) will not be enough to absorb the growing numbers of eligible students. It is therefore unlikely that inequality will be overcome unless the demands of the January 2011 revolution are met and new approaches are adopted to enable students from less advantaged backgrounds to enrol in higher education.

Inclusiveness in education has been a principal concern of Egyptian rulers, primarily for political reasons rather than for any social justice or economic development priorities. After decades of inadequate social inclusion policies, the country's economic development has been severely affected as the quality

of higher education was sacrificed in order to maintain a high enrolment growth with modest resources. The financial resources allocated to higher education in the current constitution would not make a considerable difference compared to earlier years. A successful reform model for higher education in Egypt needs a well-crafted strategy that balances inclusiveness and quality. This balance should inform the position of Egyptian higher education on a continuum from a state-centric model to a neo-liberal model. It is vital for the higher education reform strategy to identify the priorities of this reform within the context other national priorities, especially in the current financial crisis.

Mounib (2014) attributed the declining quality of education and credibility of universities to the growth in enrolment arising from the inherited social inclusion policies. She stated, "*The quality of the public universities is dramatically falling, giving birth to the increase of private universities and colleges that are not necessarily offering good or better education. However, they are offering (…) outstanding well-rewarded business opportunities*".

Perzigian (2013) believes that Egypt has other urgent priorities, which are competing for resources and investments, such as security, subsidies, health care, and energy, but that education is essential for development of Egypt's human capital, which will shape the country's future. However, he asserts that much can be reformed and improved without large investment in curricula, teaching methods, and the higher education system in general. Mounib (2014) argued that "*the more you focus on reforming the curriculum and the system, the more you will probably go nowhere, given the fact that the real essence of the problem lies in the people's perception vis-a-vis the entire concept of higher education". It is more of a social dilemma that we need to focus on first and try to solve. Only then, can we successfully tackle the education file and upgrade both outlook and content".* Indeed, certain cultural and social issues with high impact on higher education, such as the prevailing perceptions, need to be identified and tackled prior to the reform; otherwise the reform efforts made will be worthless.

Mounib (2014) explained that the perception of an academic degree among the society is strongly associated with the social status and the titles of individuals. She stated, "*In the old good days, the 'Ostaz' was a lawyer or a professor and*

the 'Bashmohandes' was an engineer. Today, the doctor could be a taxi driver, a doorman, or even a worker. Those are titles that reflect certain jobs. With the dream of a quick and easy social upgrade, the trigger to study is empowered by the quest for status and not for the study itself". Interestingly, article 26 of the Egyptian constitution states, "*The creation of civil titles is prohibited*". However, the inherited culture of titles from the royal reign is still deeply rooted in Egyptian society. Hence, Mounib (2014) believes that *"a radical change of perception from individuals as well as the government, a complete change of mentality and comprehensive understanding of reform"* are a prerequisite for the reform of higher education.

On a different note, Kirby and Ibrahim (2012) pointed out the significance of entrepreneurship education as a cornerstone of higher education reform to be a built-in component in all curricula regardless of discipline, rather than in business administration curricula. They emphasized that entrepreneurship education requires *"a fundamental rethink about the purpose of higher education"* and a major shift in traditional teaching, learning and assessment processes, allowing teachers to become facilitators of the learning process and students to become active learners who are tested for their ability rather than the simple ability to regurgitate facts. This radical approach would transform Egyptian universities into enterprising institutions (Kirby & Ibrahim, 2012, p.107). By the same token, Perzigian (2013) emphasized that expanding entrepreneurism education should be a national priority in Egypt, adding that for Egypt to become more competitive, it needs to make the increase in STEM students and in the proportion of females a national priority. In the survey conducted in this research, an average of 71% of undergraduate students are looking to start a private business.

3.7. Reform Models

Proponents of a 'state-centric model' and of a 'neo-liberal model' of university–state relations both argue that they offer possibilities for reforming higher education for the global knowledge economy. These two models have both been adopted by countries with strong economic growth. However, George (2006) emphasizes that the degree to which these countries have adopted the two models varies considerably and that most of them move along a continuum

from state-centric to neo-liberal on issues such as finance, administration and curriculum, as well as translating research and innovations into viable commercial products. She recommends that developing countries should take these considerations into account when pursuing a particular model of state-higher education relations.

The World Bank report 2002 proposes that the state should steer higher education for a knowledge society through policy, regulatory and financial steering mechanisms, *"in order to strengthen the diversity of the higher education system and enable it to respond more quickly to market forces"* (George, 2006, p.599). Meanwhile, Singh (2001, p.14) believes that the challenge for policy and decision makers, either at state level or institutional level, consists in negotiating the balance between higher education as a special human right and higher education as an investable commodity. The challenge is to avoid the transformation of higher education from being confined to a narrow economic consideration. Olssen identified key differences between neo-liberal and liberal models (2002 cited in Olssen and Peters, 2005) in terms of internal governance of universities as the following:

	Neoliberal	Liberal
Mode of operation	Private	Public
Mode of control	'Hard' managerialism; contractual specification between principal–agent; autocratic control	'Soft' managerialism; collegial–democratic voting; professional consensus; diffuse control
Management function	Managers; line-management; cost centres	Leaders; community of scholars; professions; faculty
Goals	Maximize outputs; financial profit; efficiency; massification; privatization	Knowledge; research; inquiry; truth; reason; elitist; not-for-profit
Work relations	Competitive; hierarchical; workload indexed to market; corporate loyalty; no adverse criticism of university	Trust; virtue ethics; professional norms; freedom of expression and criticism; role of public intellectual
Accountability	Audit; monitoring; consumer–managerial; performance indicators; output-based (ex post)	'Soft' managerialism; professional–bureaucratic; peer review and facilitation; rule-based (ex ante)
Marketing	Centres of excellence; competition; corporate image; branding; public relations	The Kantian ideal of reason; specialization; communication; truth; democracy
Pedagogy/teaching	Semesterization; slenderization of courses; modularization; distance learning; summer schools; vocational; Mode 2 knowledge	Full year courses; traditional academic methods and course assessment methods; knowledge for its own sake; Mode 1 knowledge
Research	Externally funded; contestable; separated from teaching; controlled by government or external agency	Integrally linked to teaching; controlled from within the university; initiated and undertaken by individual academics

Source: Olssen, 2002, p. 45.

Figure 5: Model of Internal Governance of Universities

Kozma (2005, p.121) points out that economists such as Sachs and Stiglitz do not believe that one development approach fits all countries and circumstances. He also urges that each country should develop its own policies and strategies based on *"sound macroeconomic principles; its history, culture, and geography; its unique competitive advantages; and its development goals".* The UNESCO report (2005) argues that only tailor-made solutions have a chance of succeeding when it comes to development.

The tailor-made solutions comprise not only historical, cultural and geographical

aspects, but political ones as well. Schiffbauer & Shen (2010, p.60) state that despite the fact that a democratic society is often regarded as a prerequisite for economic growth and development, most empirical studies are not capable of identifying a positive link between GDP growth and democracy indexes. Furthermore, they maintain that *"it is an empirically stylized fact that: (i) most developing countries are dictatorships, whereas most developed countries are democratic; and (ii) some poor dictatorships have experienced high growth performances and emerged from poverty such as Vietnam, Egypt or China and South Korea, Taiwan, Mexico, or Ecuador before their democratization".* Schiffbauer & Shen (2010) conclude that successful economic performances may stem from both democracies and dictatorships, as long as they feature high investments in education and infrastructure, relative to current consumption. Consequently, both relatively rich democracies and relatively poor but stable dictatorships choose less distortional public policies. Poor but unstable dictatorships predictably generate the worst outcome. Poor dictatorships, according to Schiffbauer & Shen, are more likely to be stable if: *"the economy is large; and … the dictator has a higher survival probability or lower enforcement costs, due, for example, to a lower degree of ethnic diversity in the economy"* (2010, p.63). Stability and high investment in education and infrastructure are therefore the core element for development.

3.8. Knowledge Economy and Knowledge Society Frameworks

There is a clear discrepancy in the prevalence of the literature on the concepts of knowledge economy and knowledge society. Andrews noted that significant research is focussing on the concept and measurement of the knowledge economy, with less emphasis placed on the non-economic factors, or the knowledge society (2004). Despite the efforts that have been made so far to develop an assessment methodology (similar to knowledge economy) for knowledge society to measure its components, further research would be needed to refine the proposed indicators. Hence, knowledge economy as a framework for reforming higher education dominates the literature compared to knowledge society, since education and labour, and innovation systems (research) were identified as two major components of knowledge economy framework.

The World Bank's (2010) framework for the knowledge economy defines the four pillars of knowledge economy as being: 'Education and Skills' for producing knowledge workers who are able to utilise and create knowledge; 'Information Infrastructure' for facilitating effective communication and management of information; 'Economic Incentive and Institutional Regime' that embrace creating and utilising knowledge and entrepreneurship; and 'Innovation Systems' that include firms, research centres, universities, think tanks, consultants, and other organizations that can adapt global knowledge locally and produce new technology.

The transition to a knowledge economy requires developing appropriate policies, institutions, investments, and coordination across the four components of the framework. However, these components are not unique to a specific country or society since they are replicable and transferable among societies and countries (Sharma et al., 2008). Indeed, developing a reform model for higher education within the knowledge economy framework would not pick up on a country's specificities. This may explain the similarities across IGOs' country reports on higher education in less developed countries in particular. These components consist of twelve key variables that form the indicators for the knowledge economy index (see Figure 6, 'Knowledge Economy Framework').

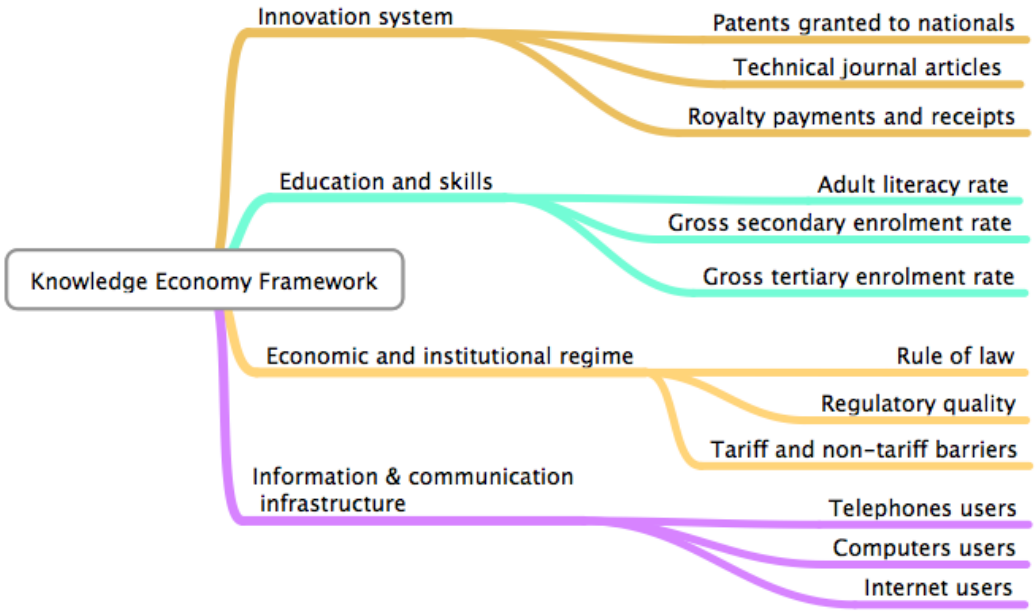

Figure 6: Knowledge Economy Framework

In developed countries HEIs have been able to cope with pressures to adopt models imposed by institutions such as OECD and the World Bank. In less developed countries, meanwhile, pressure exercised by international organisations to adopt higher education policies has been far greater, owing to the fact that such institutions bind their loans to the countries' compliance with their demands with regard to institutional and organisational structures, which imitate those of more developed countries (Vaira, 2004) (see Section 3.5, International Organisations and Higher Education in Less Developed Countries).

The higher education indicator is solely based on the gross rate of enrolment, which contributes to the knowledge economy index. A higher rate in the higher education indicator does not reflect the quality or indicate that higher education goals have been achieved in a country. However, the OECD report of 2010 proposed a reform model for higher education in Egypt that is based on the expansion of enrolment (see Section 3.6.2, 'The OECD Report of 2010').

As per the per the study's definition of knowledge economy (see Section 3.2 'Definitions, Concepts and Characteristics'), the knowledge economy framework entails a greater emphasis on knowledge production by knowledge workers for competitive purposes and, consequently, on the role of educational institutions to form the human capital embedded in knowledge production. It is worth noting that the production of knowledge is based on various social forces producing 'knowledge in action' and seeking to challenge the truth, rather than a competitive goal to be pursued by scholars in isolation from society. This suggests that the notion of a 'knowledge economy' is narrow enough to be a framework for a higher education reform.

One of the objectives of this study is to explore the feasibility of higher education reform in Egypt within the context of knowledge economy, looking mainly at the expansion of enrolment in higher education and the role of higher educational institutions as envisaged by international organisations.

In the same vein, Sharma et al. (2008) developed a knowledge society framework that is based on four pillars namely: 'Infrastructure', 'Governance', 'Human Capital' and 'Culture' that are supported by thirteen '*interacting dimensions*'. However, unlike Knowledge Economy indicators, these

dimensions do not necessarily correspond to particular pillars (see Figure 7, 'Knowledge Society Framework').

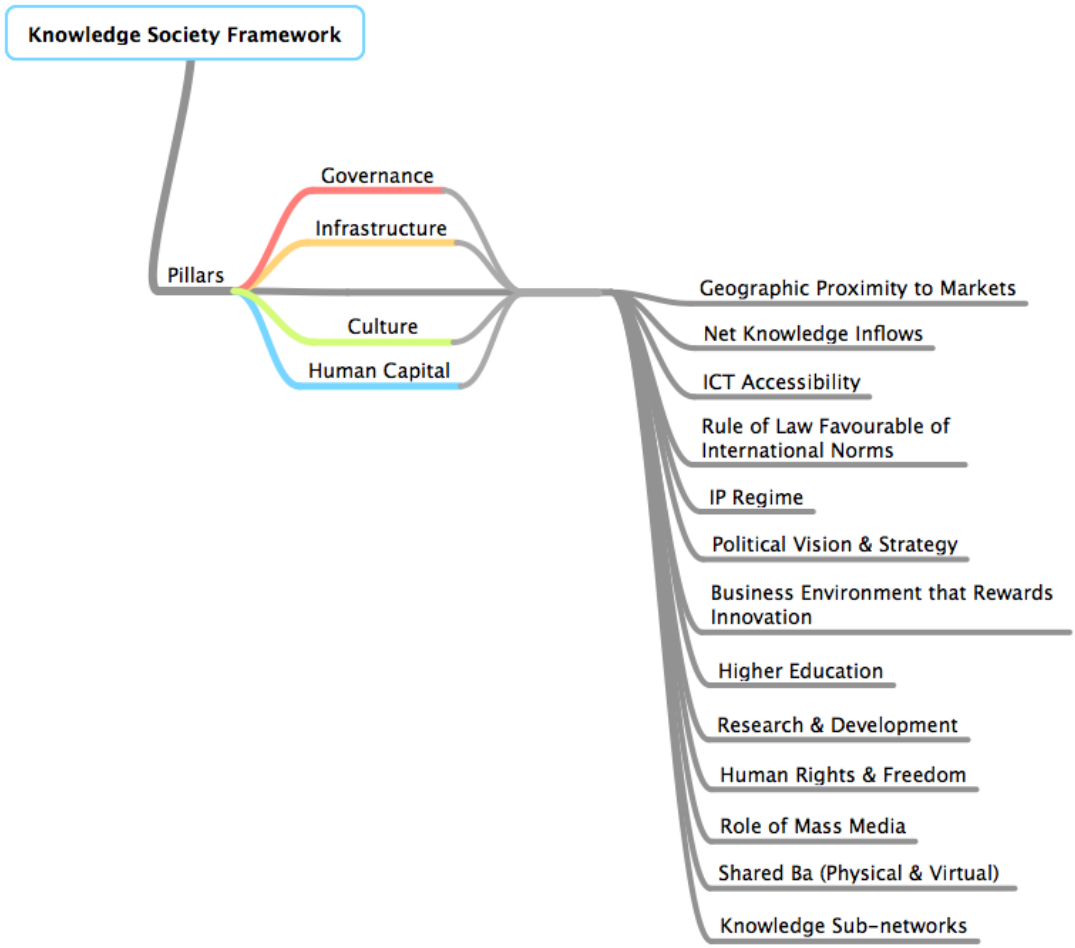

Figure 7: Knowledge Society Framework

It seems that there is a great deal of similarities between the pillars of both frameworks, since infrastructure, governance and human capital are replicable and transferable to other societies, whereas 'Culture' is a unique pillar for each society, which consequently becomes a sustainable competitive advantage for a given society (Sharma et al., 2008). However, the 13 dimensions of the knowledge society framework are not meant to composite a measure or ranking of knowledge societies (Sharma, Ng, Dharmawirya & Samuel, 2009).

Sharma et al. (2008) suggest that knowledge societies are currently based on thirteen dimensions rather than indicators, the interactive effects of which are mediated through the pillar of culture. Those dimensions are:

- 'Geographic Proximity to Markets' where goods, services and knowledge

infrastructure are clustered. Members of a geographic grouping (e.g. EU, ASEAN, GCC) have this dimension developed naturally since they are encouraging economic, cultural, political and social cooperation among themselves.

- 'Net Knowledge Inflows' that is concerned with the dissemination of diversified knowledge that may result from foreign investments or immigration (e.g. Arabian Gulf Countries).
- 'ICT Accessibility' refers to the availability and affordability of computers and broadband connectivity to the Internet. This dimension, to a great extent, is similar to the indicators of "Information Infrastructure" pillar in the knowledge economy framework, which can be measurable.
- 'Rule of Law Favourable of International Norms' increases the level of trust among individuals and organisations in any society. It is essential to preserve a common understanding of values, practices and norms upon which these activities can take place. To some extent, this dimension similar to the "Rule of Law" indicator of "Economic Incentive and Institutional Regime" pillar in the knowledge economy framework. However, this dimension maintains the focus on international norms and shared values.
- 'Intellectual Property (IP) Regime' protects the rights of research exploitation, however a balance is needed to promote and disseminate useful knowledge for the enlightenment of society (UNESCO, 2005). The 'Patents Granted', 'Technical Journal Articles' and 'Royalties Payments and Receipts' within the 'Innovation Systems' pillar of the knowledge economy framework have a similar IP functionality. However, the balance with knowledge sharing for social enlightenment is not present in the knowledge economy framework.
- 'Political Vision & Strategy' articulate and ensure the transition towards a knowledge society. This may require a considerable margin of freedom, transparency, accountability, tolerance and political openness (Olssen and Peters, 2005). Despite the importance of this dimension in guiding the establishment and development of a knowledge society, it may not

be feasible to measure. On the other hand, there are other knowledge societies with much less margins of freedom, transparency, accountability, tolerance and political openness such as China and Russia.

- The 'Business Environment that Rewards Innovation' dimension follows in the footsteps of certain knowledge economy indicators, namely 'Regularity Quality' and 'Tariff and Non-Tariff Barriers', since transparent and fair policies were judged to be the key for innovations rather than wasting time overcoming the barriers of bureaucracy. It may not be feasible to measure the level of innovation in a society, but possibly measuring the efficiency of a rewarding system.
- The 'Higher Education' dimension has been considered to be one of the dimensions for the knowledge society framework due to the anticipated role of higher education in promoting the culture of knowledge sharing among societies, notwithstanding the declining role of universities as the established knowledge producer and the custodian of knowledge. This will be discussed further in section 3.4, 'Role of Higher Education'. Meanwhile, the higher education indicator within the knowledge economy framework is based on the gross tertiary enrolment rate.
- The 'Research & Development' dimension within the knowledge society framework is concerned with the programmes that tackle the problems and pressing issues of society, in order to allow it to progress and regenerate. Meanwhile, the "Innovation Systems" indicators within the knowledge economy framework are concerned with the productivity of research and development such as granted patented, technical journal articles and royalty payments and receipts.
- The 'Human Rights & Freedom' dimension has been derived from Universal Declaration of Human Rights and the associated series of human rights agreements such as the right to education (see Section 3.4, 'Role of Higher Education'). Sharma et al. (2008) pointed out the need for citizen rights (e.g. access to data, universal access to knowledge, etc.) for human development and greater citizen empowerment. However, citizen rights may not be essential for

establishing a knowledge society, yet they may be indispensable for its development. It is worth mentioning that while human rights and freedom may co-exist with the rule of law, this is not a necessity, since some societies may possess only one of the two dimensions (Sharma et al., 2008).

- The 'Role of Mass Media' dimension is concerned with disseminated information and knowledge in the public sphere as well as the associated societal debates that contribute to the formation of society's collective wisdom. However, media literacy skills are necessary to access and analyse information resources and are "*often correlated with political maturity and economic development and literacy*" (Sharma et al., 2008, p.11).
- The 'Shared context for knowledge creation (Ba)' dimension: Nonaka et al. (2000, p.14) referred to the Japanese concept 'Ba' within a unified model of dynamic knowledge creation as the shared context of space and time, since Ba is "*a place where information is interpreted to become knowledge*", whether a physical space, virtual space or a mental space such as shared ideals.

Nonaka et al. (2000) distinguished between four types of Ba, namely originating Ba, dialoguing Ba, systemising Ba and exercising Ba, which are described according to the type of interaction (individually or collectively) and the media used for interaction (face-to-face or virtual) such as books, manuals, memos, e-mails or teleconferences (see Figure 8, 'Types of Ba'). Hence, facilitating the creation of knowledge requires establishing, maintaining and utilising "Ba" (space and time) as well as understanding the different characteristics of each Ba and how they relate to each other.

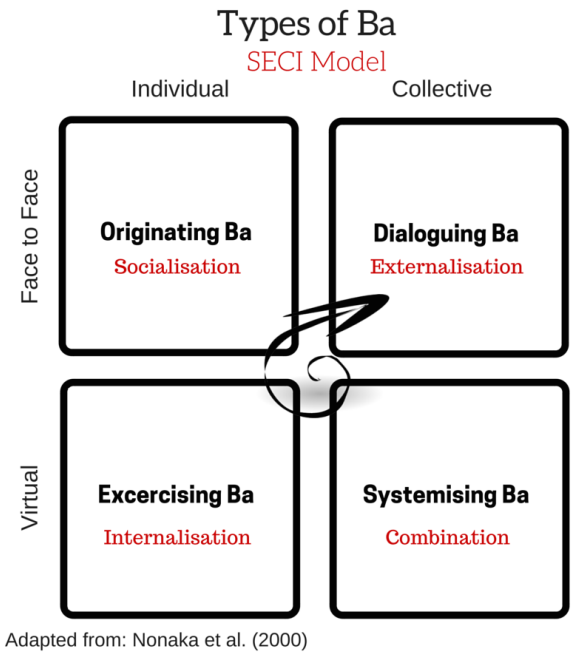

Figure 8: Types of Ba

- The 'Knowledge Sub-networks' dimension reflects the importance of informal groups that share interest and expertise and act as localised knowledge sharing and co-creation channels. Such sub-networks provide platforms to its members that are not available outside in the wider network (Sharma et al., 2008).

The comparison of the above frameworks of knowledge economy and knowledge society reveals that, notwithstanding the fact that the dimensions of the knowledge society framework are not yet as measurable as the indicators of knowledge economy framework, they are comprehensive due to their coverage of cultural and social aspects. There is great overlap across the indicators and dimensions on education, laws and regulations, knowledge production and ICT accessibility. However, dimensions which pertain to cultural and social aspects are unique to the knowledge society framework, namely: 'Geographic Proximity to Markets', 'Net Knowledge Inflows', 'Political Vision & Strategy', 'Human Rights & Freedom', 'Role of Mass Media', 'Shared context for knowledge creation (Ba)' and 'Knowledge Sub-networks'.

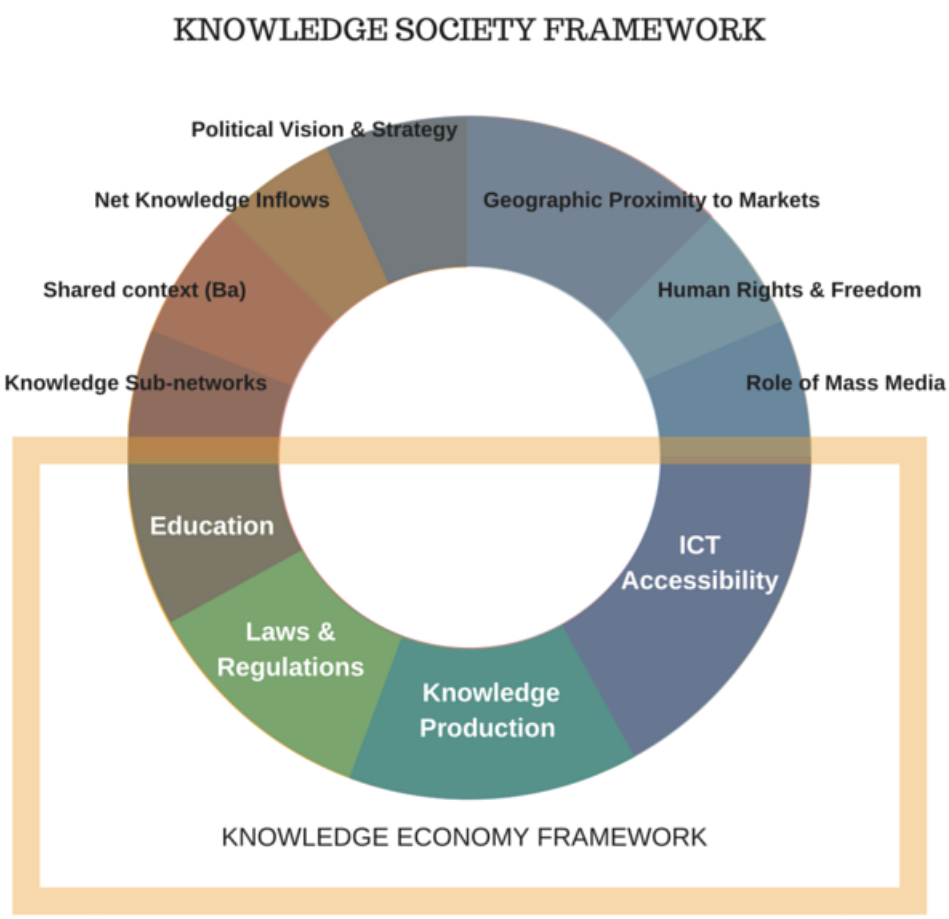

Figure 9: Knowledge Society & Knowledge Economy Frameworks

The UNESCO World Report ‘‘Towards Knowledge Societies’’ confirms that the concept of knowledge societies encompasses social, ethical and political as well as economic dimensions, and should therefore not be identified with the concept of a knowledge economy. The UNESCO report (2005) stressed that the knowledge economy framework cannot replace the knowledge society framework, since it fails to cover all dimensions of knowledge whose values cannot be reduced to a commodity exchange. It emphasized the significance of knowledge-sharing in avoiding the relegation of less-developed countries to the rank of mere consumers of the global knowledge economy.

The reform of higher education in less developed countries is seen by OECD and the World Bank as a necessity to diminish the knowledge divide and to enter into the global knowledge economy. However, reforming higher education in less developed countries to compete in a global knowledge economy may not succeed in tackling the knowledge divide, since the latter is a side effect of competitiveness in the knowledge economy. In any case, it is not known

whether the stakeholders share OECD's motivations for reforming higher education in Egypt. This may have a considerable impact on the reform plans. Hence, this research is concerned with exploring the current conception of reforming higher education in Egypt. It should be noted that knowledge society as framework for reforming higher education is to a certain extent adopted by UNESCO and UNDP for reducing the knowledge divide and promoting sustainable development.

3.9. Conceptual Framework

From the literature review, it becomes apparent that there is no 'one reform model that fits all countries'. It is the responsibility of each country to develop its own model that moves along a continuum from a state-centric model to a neo-liberal model (George, 2006), based on sound macroeconomic principles, its history, culture, and geography, its unique competitive advantages, and its development goals (Kozma, 2005). Sharma et al. (2008) stressed that culture is a unique pillar, which within a given society becomes a sustainable competitive advantage.

Morgan and White (2014a) stress the importance of a development policy, and most notably an education policy, which takes account of the interrelation between society, state and market. Each of these three concepts is affected by factors, which differ according to regional, national and local needs. Notions of 'Society' are affected by issues such as historical trajectory, cultural patterns and interaction with other cultures including immigration, shared values, the culture of public debate, internet accessibility, and the balance between public and private goods. Notions of the 'State' are affected by the historical trajectory and the balance between the state and civil society, while the 'Market' economy is defined by the structures present in society and in the state.

The conceptual framework of this thesis is based on idea of reconciliation of society, state and market to achieve both efficiency and social justice in economic and social development (Morgan and White, 2014a) where higher education is positioned according to these three interacting dimensions that shape higher education:

- State: the state's role will be variable based on the required balance between provision of higher education (state-centric model) and regulation of higher education (neo-liberal model). The size and role of higher education (public and private), as well the efficiency of the regulatory framework, are among the criteria for the positioning of higher education in terms of the state's role in providing higher education (public). Higher education provision does not necessarily have to be free and it may not be inclusive. Hence there is a need for reconciliation with society and the market to balance the cost of higher education and to address the inclusiveness issue.

- Society: the landscape of the higher education system (size and shape) reflects the societal role of higher education and the importance of explicit knowledge for the economy, society, and culture of a country (Teichler, 2007). The societal role of higher education will stipulate to what extent higher education is considered public good (state-centric model) vs. private good (neo-liberal model).

- Market: the market dimension represents the value of higher education and how it has been provided, whether as an investable commodity (neo-liberal model) or a human right (state-centric model). The job market will mandate the economic value of higher education and reflect the extent to which higher education meets the national economic development plan.

The concept of reconciliation between state, society and market is a necessity to maintain the required balance, due to the continuous interaction and influence across the three dimensions over various issues on higher education. In the context of the global knowledge economy, the market dimension takes the lead over the state and clearly over society. Adjusting the state's role for reforming higher education within the context of a knowledge society framework in such a way that allows for wider cultural and social considerations to be taken, should maintain the balance in favour of society (see Section 3.8, 'Knowledge Economy and Knowledge Society Frameworks').

A combination of positions across the below continua (see Figure 10, 'Conceptual Framework of Reforming Higher Education') should shape higher education in relation to both neoliberal and state-centric models in order to meet a country's specific development goals.

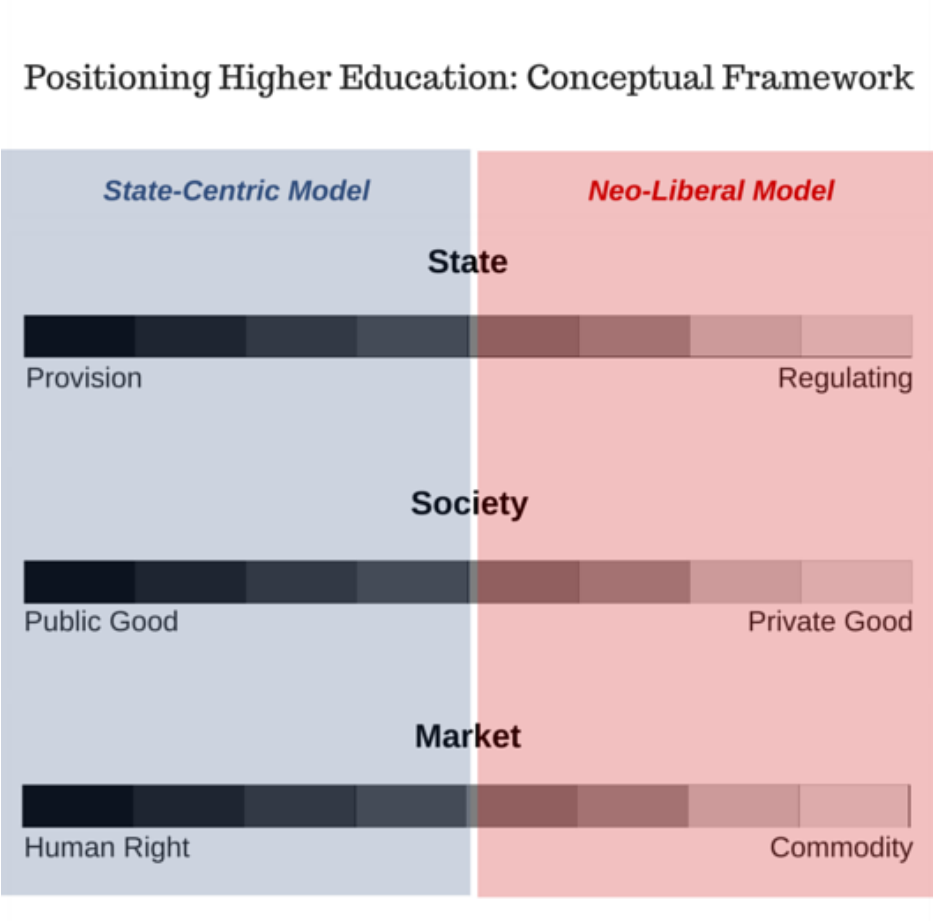

Figure 10: Conceptual Framework of Reforming Higher Education

Due to the complexity of the subject and influential factors in identifying the characteristics of a tailor-made reform model for reforming higher education, the conceptual framework is intended to conceptualise how a country could develop its own model – one which moves along a continuum from a state-centric model to a neo-liberal model across the state, society and market dimensions, on issues such as quality, resources, relevance, enrolment, inclusiveness, regulatory framework, private higher education and the university role, that are essential for configuring the characteristics of the model. These issues have been identified through the review of literature, specifically the OECD country report (2010) and data analysis along with relevant dimensions and indicators of the knowledge society framework (see Figure 7) and the knowledge economy framework (see Figure 6) respectively, such as student enrolment (KE indicator), human rights and freedom (KS dimension). Furthermore, the

identified higher education issues guided, in an iterative process, both the data collection and the data analysis according to a thematic approach (see Figure 27, 'Findings Thematic Structure') that grouped the related higher education issues together. However, for the purpose of maintaining the focus on the identified higher education issues, the Discussion chapter has been structured according to the identified issues rather than the themes.

In this research, the society dimension is represented by the students, academics and PIFs, whereas the state and market dimensions are represented by the officials and SMEs, respectively. The conceptual framework largely dictated the use of a mixed methods approach for data collection. The state, society and market dimensions guided the sources of data. Officials' interviews and the governmental publications review reflected the state dimension; students and academics questionnaires along with PIFs' interviews reflected the society dimension; and SMEs' interviews and the OECD report review reflected the market dimension (see Section 4.5, 'Data Collection'). On the other hand, the criteria of the dimensions along with associated issues of higher education guided the data type (quantitative/qualitative) from each source.

The criterion that guided the state's position on higher education was the provision of higher education versus the regulation of higher education. Hence, understanding the landscape of higher education in Egypt was indispensable, along with the current status of higher education in Egypt that demonstrated the capabilities of the state in terms of resources, planning and regulating higher education. Therefore, the questionnaires for UG and PG and Academics have been utilised to collect data on the students' and academics' perceptions on the higher education issues in Egypt. This will reveal the interaction between the state and society dimensions.

As regards the criterion that guided society's position on higher education was the perception of higher education as a public good versus private good among students and academics as well as prominent intellectual figures in Egypt. This perception has been reflected in the prerequisites and the priorities of the reform of higher education as well as the role of higher education in the collective awareness. Therefore, the perspectives on the prerequisites and

priorities of higher education reform have been gathered from all the participants in this research through questionnaires and interviews where applicable. This will reveal the interaction between both the state and market dimensions, and the society dimension.

Finally, with regard to the criterion that guided the market dimension was the relevance of higher education to the job market and the commoditisation of higher education, including its impact on higher education as a human right, that responds to the state's commitment to the inclusiveness. Therefore, it was crucial to gather the views of academics (questionnaires) and prominent intellectual figures (interviews) on the role of higher education in Egypt, as well as the students and academics perspectives in terms of job market and students demand. This will reveal the interaction between the market dimension and the society dimension.

3.10. Summary

Due to the globalisation of the knowledge economy, the monopoly of the university as the only authority in the creation, validation and dissemination of knowledge has been challenged directly by procedural knowledge, which is validated by a massified and technologically-sophisticated higher education market and embedded in its situation rather than existing separately. With this weaker role of the custodians of propositional knowledge and a greater exploitation of vocationally oriented procedural knowledge, the role of the university as the established education provider is brought into question especially in connection with the legitimate need for employability in the global knowledge economy. This could justify the relegation of the university's main role in R&D to a more basic role and the focus on the university's role in teaching to qualify graduates for the job market. All of this informed the conceptualisation of the research framework. The discussion of the Egyptian case revealed some key issues of relevance to higher education in Egypt such as the low relevancy of higher education graduates' knowledge and skills for the needs of the job market. It also revealed the presence of a relatively significant number of professional and technical workers who are not adequately qualified due to low educational attainment, while highly skilled individuals leave the country to work abroad, and a lack of capacity to repatriate migrants or attract

replacements from other countries.

As noted above, the growth in higher education enrolment has not improved inclusiveness levels in Egypt for males, and has improved them only slightly for females. Expansion of higher education participation can promote inclusiveness and equity; however, this is subject to the number of eligible students falling below the number of available higher education places, without neglecting the quality. This chapter has raised issues that will be addressed by the findings arising from this research. In order to deepen the understanding and reveal new dimensions of these raised issues, a five-stage research process has been designed, which includes online questionnaires for undergraduate students, postgraduate students and academics across private and public HEIs in Egypt, as well as semi-structured interviews with subject matter experts (SMEs), prominent intellectual figures (PIFs) and officials (OFFs). The next chapter will report and discuss the research methods that have been utilised for this research.

CHAPTER 4

4. METHODOLOGY AND RESEARCH METHODS

4.1. Introduction

This chapter outlines the informing paradigm, the methodological approach and the individual research methods that have been used to address the research questions. An exploratory study has been designed using a mixed methods model with an aim of increasing the validity of the findings. The research adopts a hermeneutic approach to inform a five-stage research design to deepen understanding and reveal new dimensions of the topic. In stage 1-2, the fieldwork revolved around online questionnaires for undergraduate and postgraduate students and academics across private and public HEIs in Egypt. Also, semi-structured interviews (stage 3-5) were conducted with officials (OFFs) and prominent intellectual figures (PIFs) in Egypt as well as subject matter experts (SMEs) from OECD and UNESCO. The analyses of data were conducted in two parallel phases to accommodate both quantitative data and qualitative data, using a dedicated specialised platform for each data type.

4.1.1. Research Paradigms

A paradigm is a set of beliefs, values and traditions that form a certain perspective. The research paradigm is a framework that stipulates a certain set of beliefs, values and traditions in conducting research. Teddlie and Tashakkori (2009) distinguished between five established and commonly used research paradigms: constructivism, transformative-emancipatory, pragmatism, postpositivism, and positivism, according to a set of philosophical criteria that includes research methods, logic, epistemology, axiology, ontology, causal linkages, and the possibility of generalisation. Figure 12 (‘Paradigm Continua’) demonstrates an adaptation of Teddlie and Tashakkori's (2009) five paradigms as continua based on ontology, epistemology, methodology and axiology intrinsic in each paradigm. Constructivism is on the extreme left with its qualitative research methods, subjectivity of knowledge and multiple ‘truths’ that are equally true, whereas positivism is on the extreme right with its quantitative

research methods, objectivity of knowledge and one reality.

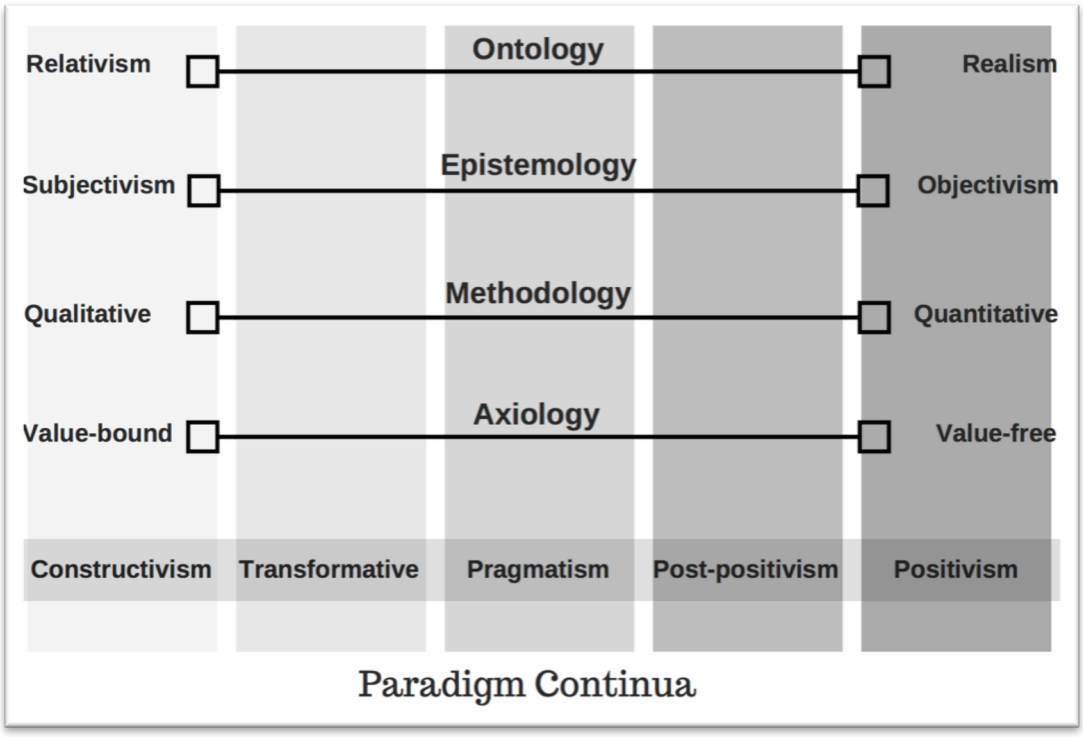

Figure 11: Paradigm Continua

Pragmatism, located in the middle of the continuum, acknowledges benefit in both relativism with multiple realities that are individually constructed and are equally true, and realism with a single correct reality. Both frameworks are utilised by pragmatists depending on the question.

The transformative-emancipatory paradigm is a more pragmatic form that accepts multiple viewpoints of the ‘truth’, with emphasis on the ‘truths’ that are believed to result in greater social justice.

Post-positivism shares with positivism the belief in a single reality whose truths apply for all, but there are so many variables that it may not be possible to make explicit all of the details needed to fully understand those truths or to make statements that are completely true across all circumstances.

The pragmatic paradigm has more than one perspective of the ‘truth’, hence the more data is corroborated from different perspectives (methods), the more likely a statement is true or close to true. Despite the fact that the pragmatic paradigm is a relatively more recent paradigm than either constructivism or positivism, it influences contemporary sociocultural research profoundly. The flexibility of the

pragmatic paradigm justifies the increasing amount of sociocultural research in the twenty-first century conducted from a pragmatic perspective, where both objective and subjective points of view are acceptable to answer specific questions. This positioned mixed method research designs that utilise both quantitative and qualitative data for a better understanding the social and cultural dynamics impacting in a given context (Schoen, 2011).

Research Paradigms of the Study

It was necessary to identify the paradigm and the associated research methods to be utilized in carrying out the scientific investigation. Certain paradigms were assessed against the nature of this research that is represented by a set of research questions and the overall aim, in terms of acquiring and disseminating knowledge pertinent to the research and the nature of this knowledge (see Section 4.1.2, 'Ontological and Epistemological Positions'). The positivism paradigm was recognized for its objectivism regarding social phenomena and its research methods focusing on quantitative analysis, whereas constructivism (anti-positivism) stresses subjectivism regarding social phenomena and its research methods revolving around qualitative analysis (Dash, 2005). As it has been noted above, pragmatism is popular among the mixed methods research community, the transformative-emancipatory paradigm, a more pragmatic form of critical theory (Creswell & Plano Clark, 2011), was deemed to be the appropriate research paradigm since it acknowledges multiple viewpoints of 'truth', with an axiological emphasis on the 'truths' that are believed to result in greater social justice. It is worth mentioning that the transformative paradigm not only provides a framework for examining assumptions that explicitly address social justice, but also power issues and cultural complexity (Mertens, 2007).

On the other hand, the transformative paradigm has great value in the disciplines of sociology and education, where *"knowledge is not neutral but reflects the power and social relationships within the societies we construct"* (Mertens, 2003 cited in De Lisle, 2011, p.91). By the same token, Habermas (1972) hypothetically constructed three types of generated knowledge (within the critical theory framework), which make up the knowledge-constitutive interest:

- An empirical and analytical knowledge type (technical interest) that is concerned with the control of the physical environment.
- A hermeneutic and historical knowledge type (practical interest) that is concerned with understanding the meaning of situation.
- A critical knowledge type (emancipating interest) that is concerned with the development and the advancement.

Research within a transformative paradigm framework, in a sense, is not neutral and value-free. However, the transformative paradigm provides an overarching framework for addressing issues with a great impact on public good. The researcher's role within this context is motivated by inequalities and injustices in society and the need for reform (Mertens, 2007).

4.1.2. Ontological and Epistemological Positions

Ontologically - in relation to the theory of existence – the transformative paradigm recognizes both the reality of empirical facts and realities that are socially constructed. Transformative ontology is a combination of realism, which treats reality as objective, and independent of an individual perception, and relativism that accepts multiple realities that are individually constructed and where each reality is equally true. Conducting a transformative research requires a considerable awareness of societal dynamics and values in identifying realities that may hold potential for a social transformation (Mertens, 2007 and Schoen, 2011).

Epistemologically - in relation to the theory of knowledge – transformative research accepts both objective (empirical research design) and subjective (ethnographic research design) knowledge, and believes that both complement each other for building strong theories that incorporate both deductive and inductive logic. Hence, transferability (within limits) beyond specific context would be feasible (Schoen, 2011).

Ontological and Epistemological Positions of the Study

The positivism paradigm has its own merits in that it asserts an objective external reality that applies to all which can be measured and comprehended. However, measurements concerning the knowledge economy are not

necessarily enough to take account of socio-cultural realities, when it comes to the reform of higher education. In terms of the ontological position of this study, the transformative-emancipatory paradigm is well suited to acknowledge multiple points of view regarding what is 'truth' and places a higher value on the 'truths' that are believed to result in greater social justice. The study sought to explore various viewpoints that included students, academics, prominent intellectual figures in the Egyptian society, and subject matter experts of international organisations as well as officials and decision makers of the MoHE. Different research method strategies have been utilised to collect data from different sources (i.e. students, academics, SMEs, PIFs and Officials). Hence, this study was able to epistemologically accommodate both objective and subjective point of views, which will be reflected positively on the transferability of the research results.

4.2. Research Methodology

4.2.1. Research Sample and Sampling

The mixed research methods guided the sampling design to include quantitative and qualitative sampling strategies that are implemented independently. The sampling method included both probability sampling and non-probability sampling. The variation in the sample method would allow for fully capturing the nuances of complex issues (De Lisle, 2011). A probability sampling method has been utilised for the academics and students questionnaires, whereas a non-probability sampling has been utilised for the SMEs, PIFs and Officials interviews.

4.2.2. Quantitative sampling strategy

Within the context of the conceptual framework of this study (Section 3.9), the 'Society' dimension is mainly represented by the stakeholders of higher education. Hence, the theoretical population is all the higher education academics and students (both undergraduates and postgraduates) in Egypt. However, access to the target/accessible population is prohibitive in terms of time, cost and geographical distribution of universities across Egypt. A method of sampling was essential to represent the population and ensure random selection. There are various techniques that ensure equal probabilities in the

sample. Stratified random sampling has been chosen to divide the population into homogeneous sub-categories and then taking a convenience sampling in each sub-category. The stratified sample is designed to consist of five categories and 14 sub-categories that provide an appropriate representation of the population for reducing coverage error (Birchall, 2011; Fricker, 2011).

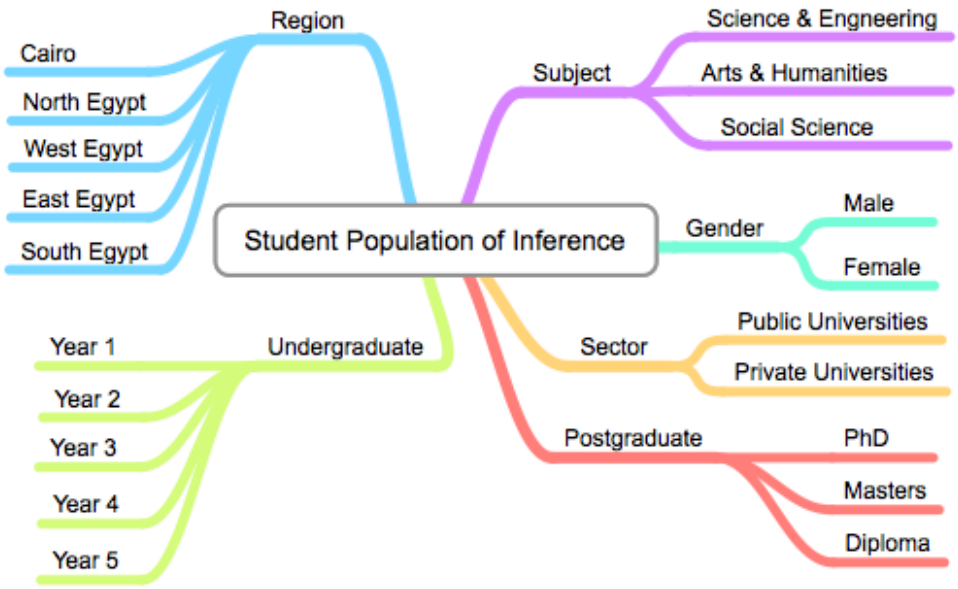

Figure 12: Stratified Sampling Design

The geographical category, one of the five major categories, represents the five regions of Egypt (i.e. Cairo, North Egypt, West Egypt, East Egypt and South Egypt), each of which has distinct characteristics with regard to population, development, social and geographical features, and the historical background of higher education.

The second category is that of the subject area, which includes Arts and Humanities, Social Science, and Science and Engineering, to ensure wide representation of students and academics, since there may be different views or needs when it comes to higher education.

The third category is that of gender, as I included an adequate representation of both genders.

The fourth category, the sector, ensures a representation from both public and private universities, especially since there has been surge in the number of

private universities to meet the high demand for higher education.

The fifth and final category (applies only to students' questionnaire) is specifying whether the respondent is an undergraduate or postgraduate student. This seeks to cover major issues related to both taught courses and research. The postgraduate level includes three sub-categories for PhD, Masters and diploma students, whereas the undergraduate level includes five sub-categories for years 1 to 5.

To determine the sample size I had to work back from how many responses are required for the analysis. One rough and ready rule is having about 20-30 responses in each of the major sub-categories of the sample.

The total number of required responses for postgraduate students was: 15 sub-categories x 30 responses = 450 responses, while the total number of required responses for undergraduate students is: 17 sub-categories x 30 responses = 510 responses. As for academics, the total number of required responses is: 12 sub-categories (excluding the level category of students) x 30 responses = 360 responses.

These numbers then needed modifying by the anticipated response rate to determine the target sample size. It is quite common for survey response rates to be around 20%, which means sending five times as many questionnaires as I want responses. Hence, at least 2,250, 2,550 and 1,800 questionnaires needed to be distributed among postgraduate students, undergraduate students and academics respectively to obtain anticipated numbers of 450, 510 and 360 responses (Survey Design, 2010).

At a confidence level of 95%, the anticipated responses for postgraduate students, undergraduate students and academics attract the following confidence intervals (margin of error): ± 4.62%, ± 4.34% and ± 5.17% respectively (see Table 1, 'Quantitative Sampling Strategy').

The confidence interval is based on calculating the sample size at certain confidence level according to the following formula (Survey Design, 2010):

Equation 1: Confidence interval

$$c = \sqrt[2]{\frac{Z^2 * p * (1-p)}{SS}}$$

Z = the Z value (i.e. 1.96 for 95% confidence level).

p = percentage of picking a certain choice, expressed as decimal (i.e. 0.5 represents the worst case percentage that is 50%).

c = confidence interval, expressed as decimal (e.g. 0.04 = ±4%).

ss = Sample size.

Table 1: Quantitative Sampling Strategy

	Postgraduates	*Undergraduates*	*Academics*
Targeted Population	2,250	2,550	1800
Sample Size	450	510	360
Confidence level	95%	95%	95%
Confidence intervals	± 4.62%	± 4.34%	± 5.17%

Marshall (1996) emphasizes that while larger sample sizes minimise the chance of a random sampling error, there is no need to study very large samples, as the sampling error is inversely proportional to the square root of the sample size. Instead, there is an optimum sample size, which is required for valid inferences about the population. This optimum number, Marshall states, *"depends upon the parameters of the phenomenon under study, for example the rarity of the event or the expected size of differences in outcome between the intervention and control groups*" (Marshall, 1996, p.522).

Since it would have been unreasonable and impractical to physically distribute the proposed number of questionnaires to universities across Egypt, the decision was made for the respondents to be approached via online

questionnaires rather than using cluster (area) random sampling approach.

The decision was based on the fact that Internet access in Egypt is among the fastest-growing in the world and the total number of social media users (i.e. Facebook) in Egypt stands at 14 million (see Figure 13, 'Number of Facebook Users'), up from 3 million at the beginning of 2010 (April), having risen almost fivefold in 3 years. The percentage of female users is considerably lower than the global average, 33.4% as of May 2013. Youth (between the ages of 15 and 29) account for over 70% of Facebook users in Egypt, which stands at around 10 million users (Salem, Mourtada & Alshaer, 2013). Moreover, online surveys comparing to other modes of surveys (e.g. face to face, telephone and mail), are convenient for respondents to take in their own time and at their own pace.

Vehovar & Manfreda (2011) highlighted issues pertaining to probability samples in online surveys, which are coverage and sampling frame issues. The first issue arises from the fact that not all members of the general population have access to the Internet, whereas the second issue is that "*(N)o single registry or list of e-mail addresses exists and thus list-based sampling frames are generally available only for specific populations (government organizations, corporations, etc.)"* (Fricker, 2011, p.212). However, implementing a frameless sampling strategy on the target population whereby every member has a chance of being sampled reduces the coverage error. Furthermore, post-stratifying provides an appropriate representation of the population of inference that reduces coverage error too (Fricker, 2011). In this study the sample frame is the whole population assuming that all students and academics have access to their universities' websites. This should ensure a maximum coverage. An additional sample frame, the social media groups (i.e. Facebook) that are associated with these universities and institutions, has been utilised to increase the number of respondents. It is worth clarifying that the "*probability with which every member of the frame population could have been selected ...(does) not necessarily have to be equal for each member of the sampling frame*" (Fricker, 2011, p.199). Therefore, the utilised combination of a sample frame and frameless sample should allow for coverage, probability and increasing the number of respondents.

Support was received by the MoHE's ICT Project, which directed the

webmasters at Egyptian universities to provide links to these questionnaires on university websites. Moreover, links to the surveys were also sent on over 50 Facebook groups that are associated with Egyptian universities and other HEIs (see Appendix 9.8).

Vehovar & Manfreda (2011) pointed out that on average web surveys gain from 6 percent to 15 percent lower response rate than other survey modes such as telephone surveys. However, it would be safe to assume that the number of people who would have seen the links was far beyond the figure of 2,550 mentioned above, since the number of students affiliated to the targeted Facebook groups stands at over 836,000 (see Appendix 9.8), in addition to the visitors of the Egyptian universities official websites.

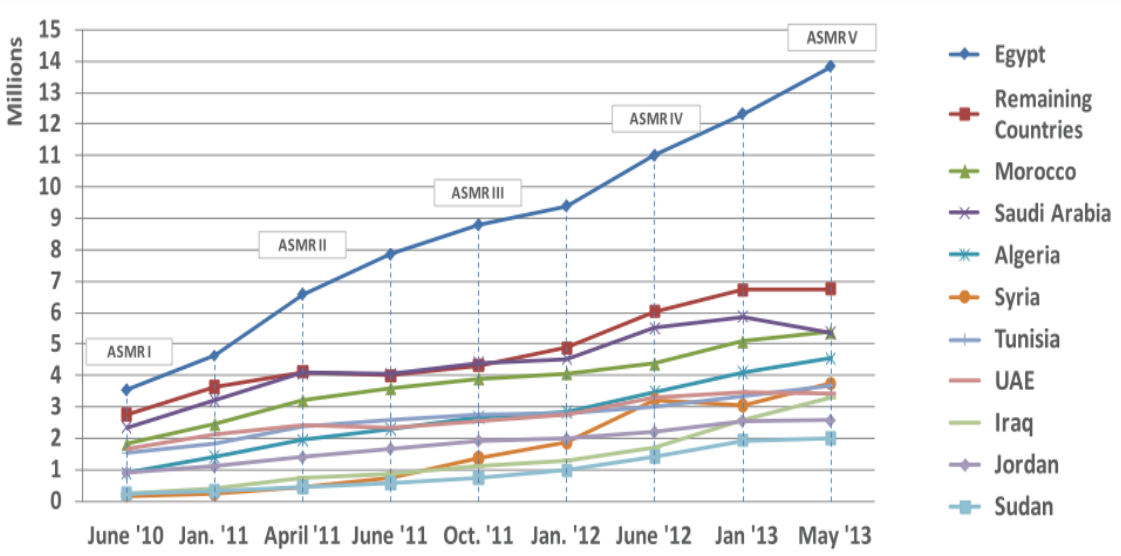

Figure 13: Number of Facebook Users in the Top 10 Arab Countries between June 2010 and May 2013 (Arab Social Media Report, 5th ed.)

It is worth mentioning that a total of 1,005 undergraduate students and 439 postgraduate students took part in the respective surveys. Of these, 630 undergraduates and 233 postgraduates completed the questionnaires. The number of completed and valid undergraduate questionnaires was 577, while 53 were eliminated either due to mistakes or for not fulfilling the requisites. The number of completed and valid postgraduate questionnaires was 233. All fulfilled the requisites. A total of 329 academics took part in this survey, 227 of whom completed the questionnaires. The number of completed and valid questionnaires that have fulfilled the requisites is 223.

4.2.3. Qualitative sampling strategy

While results can best be generalised through the study of random samples, a deeper understanding of more complex issues related to human behaviour is best achieved through other, more effective ways (Marshall, 1996). The purposive sample is a sampling technique providing a vital aid in understanding issues pertinent to a study, namely through a purposefully selected non-probability sample of individuals most likely to help answer the research question (Trochim, 2006). Marshall (1996, p.523) considers this technique to be *"a more intellectual strategy than the simple demographic stratification of epidemiological studies".* The individuals selected may be stratified according to attitudes, they may be selected for being outliers (deviant sample), or for having specific experiences (critical case sample) or expertise (key informant sample), and they may go on to suggest other individuals to take part in the study (snowball sample). This non-probability sampling technique allows researchers to select individuals, offering a wide range of perspectives, which support or reject specific views (Marshall, 1996).

Within the context of the conceptual framework (Section 3.9), three categories have been identified for such a selection to reflect the 'State', 'Society' and 'Market' dimensions, respectively:

(1) Officials/decision makers working on policies and strategies in the MoHE and representing the official line of the Ministry. One of the senior officials has been identified based on her leading role in the National Authority for Quality Assurance and Accreditation of Education (NAQAAE), while the other has been identified based on her leading role in the higher education reform programme in MoHE. For ethical considerations, the official from (NAQAAE) will be referred to in the thesis as OFF1, while the other official from MoHE will be referred to asOFF2.

(2) Prominent intellectual figures who are not necessarily directly involved in higher education, but who may have in-depth knowledge and views on the country's past and future as well as considerable popularity and good reputation among the Egyptian society. For ethical considerations, the Prominent Intellectual Figures will be referred to in the thesis as PIF1 and PIF2.

PIF1: is an academic that held leading positions in a previous Egyptian government as well as international and regional organisations. He is the author of many popular books on economy, politics, society and history.

PIF2: is an academic with high popularity among students. He is the author of many popular books on economy, politics, society and history. His works are among the bestselling books in Egypt and the Arab countries.

(3) Subject matter experts on reforming higher education in developing countries and working for IGOs (i.e. UNESCO and OECD). These were chosen deliberately as the OECD has a long history of supporting higher education reforms in LDCs, jointly with the World Bank and in the framework of knowledge economy. UNESCO on the other hand has a history of working on higher education reform within the framework of the knowledge society. Two subject matter experts from each organisation have been identified based on the following criteria:

- Expertise in higher education.
- Expertise in less developed countries cases, preferably Egypt or the Middle East.

For ethical considerations, the subject matter experts from the OECD will be referred to in the thesis as SME1 and SME2, while the subject matter experts from the UNESCO will be referred to them in the thesis by SME3 and SME4.

4.3. Research Methods

This research sought to understand the variety of experiences and perspectives on the status and the reform of higher education in Egypt, of students (undergraduates and postgraduates), academics, officials, prominent intellectual figures and subject matter experts from IGOs.

Table 2: Data Collection and Analysis Methods of Participants' Perceptions/ Beliefs/ Thoughts

Participants	Data Collection and Analysis Methods
Students	Questionnaire (Quantitative & Qualitative Analysis)
Academics	Questionnaire (Quantitative & Qualitative Analysis)
Subject Matter Experts (IGOs)	Interviews (Qualitative Analysis)
Prominent Intellectual Figures	Interviews (Qualitative Analysis)
MoHE Officials	Interviews (Qualitative Analysis)

It would appear that, without radical alteration, no earlier model for higher education reform in less-developed countries can be used as a basis for this research. Furthermore, there is a lack of comparative higher education development studies (Morgan and Wu, 2011). All available models of higher education reform come from different geographic, cultural, social, economic or political contexts. This research project is therefore guided solely by research questions where a deep understanding is needed to identify perception versus reality, social and cultural barriers versus economic, political and organisational barriers and the stakeholders' perspectives of higher education in Egypt, and whether these are aligned.

The research questions are answered, and the aim and objectives are achieved through a five-stage research process. The fieldwork revolved around online questionnaires that were shared on the universities' websites and social networks among undergraduate and postgraduate students, as well as among academics across private and public HEIs in Egypt. A circular was sent by the ICT project's office (MoHE) to webmasters of all Egyptian universities' websites to include the links to the questionnaires on their homepages. Also, semi-structured interviews with officials affiliated with the MoHE and prominent intellectual figures were conducted face-to-face in Cairo, whereas semi-structured interviews were conducted with subject matter experts from OECD and UNESCO in Paris.

4.3.1. Mapping Research Methods to Research Questions, Aims and Objectives

The figures below demonstrate the mapping of research methods by stage against the research questions (see Figure 14), as well as against research objectives (see Figure 15). This is crucial due to the complexity of the subject covered and the wide spectrum of sub-themes, where the findings will be themed according to the information required from each phase (see Table 9, 'Data Collection and Research Stages').

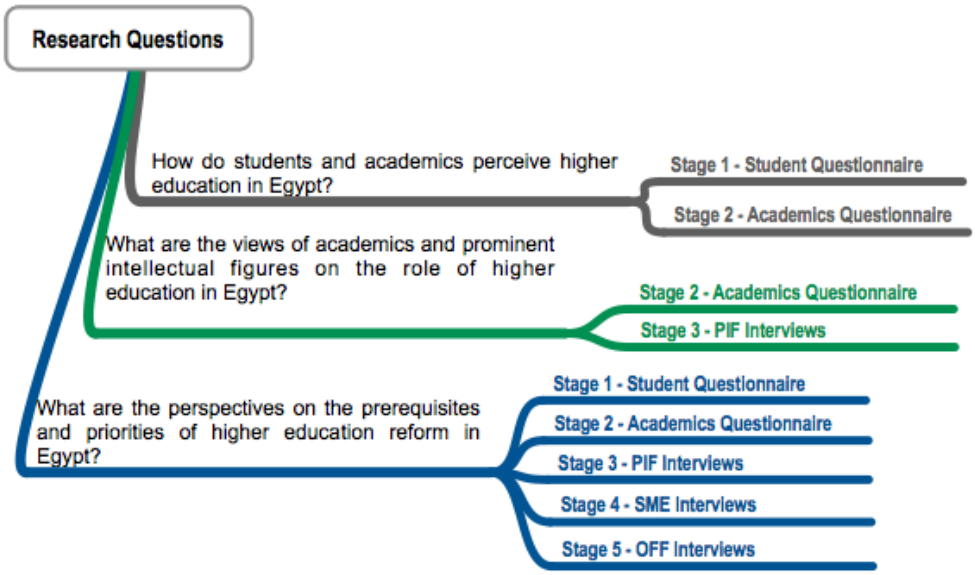

Figure 14: Mapping Research Stages to Research Questions (colour coded)

The diagram (see Figure 14) above demonstrates that the first research question on the perception of stakeholders will be answered solely by the quantitative methods, whereas the second and third, on the role of higher education, and priorities and prerequisites of the reform will be answered through all research stages, both quantitative and qualitative methods. In answering the research questions, the research stages will respond to the research objectives as per the diagram (see Figure 15) below.

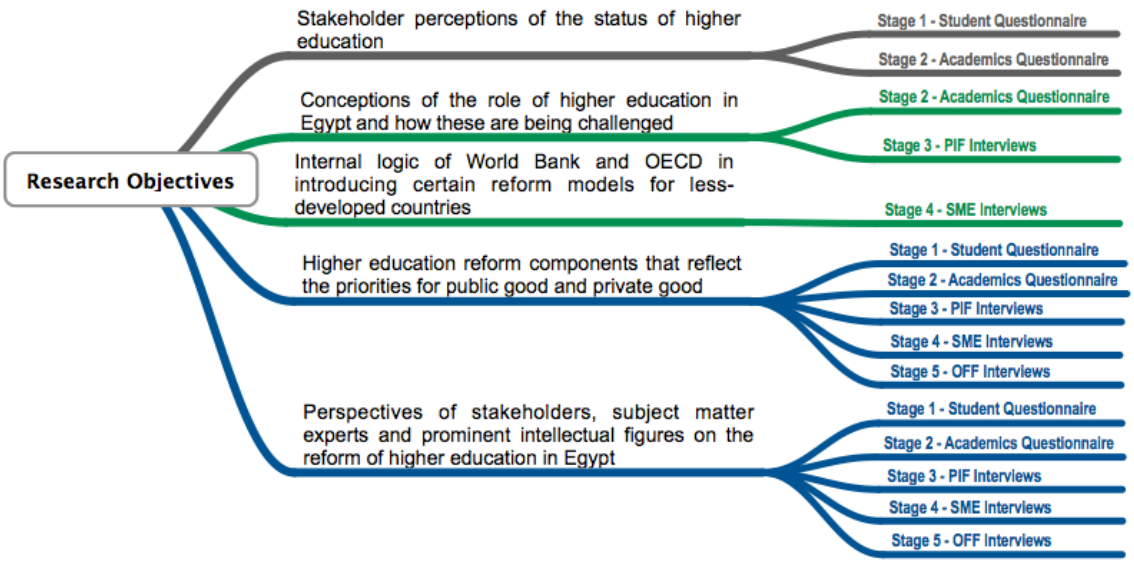

Figure 15: Mapping Research Stages to Research Objectives (colour coded)

4.3.2. Designing Process of Self-Administered Questionnaires

A Burgess (2001) points out that questionnaires should be designed in such a way that respondents will find it interesting, well-presented, of value, clear and concise. The design of the questionnaire is therefore directly related to the degree to which respondents are likely to commit to answering it.

The questionnaires conducted within this research have been designed over the following stages:

1. **Design**: The research objectives have been assigned to five research stages according to relevance (see Figure 15, 'Mapping Research Stages to Research Objectives'). The questions within each questionnaire were developed within the context of a certain set of research objectives, which is assigned to a research stage. That way, a link was established between the research aim on one side, and the individual questions on the other side. Burgess (2001, p.6) stated, "*This step is a key one that seems not to be sufficiently stressed in the literature or conducted in practice*".
2. **Questionnaire Structure**: The questionnaires have been structured thematically, to ensure a sequential logic so as to maintain the interest of respondents, in an attempt to explore distinctive aspects of the reform of higher education in Egypt. The thematic sections are slightly varied according to the type of the targeted population (see Table 3, 'Thematic Structure of the Questionnaires'). There is an appropriate variation in

questions in similar sections in the questionnaires addressing academics, postgraduate students and undergraduate students, to reflect different perspectives and experiences.

Table 3: Thematic Structure of the Questionnaires

Academics' Questionnaire	Postgraduates' Questionnaire	Undergraduates' Questionnaire
Basic Information	Basic Information	Basic Information
Teaching and Research	Study and Research	Courses and Teaching
Communication		
	Academic Support	Academic Support
Assessment and Feedback	Assessment and Feedback	Assessment and Feedback
Learning Sources	Learning Resources	Learning Resources
	Students' Union	Students' Union
	Welfare Resources and Facilities	Welfare Resources and Facilities
Job Market	Job Market	Job Market
Perception of Higher Education	Perception of Higher Education	Perception of Higher Education
Overall Satisfaction	Overall Satisfaction	Overall Satisfaction

3. **Question Type**: Appropriate scales were used in the responses according to the assigned question type: Open vs. Closed Questions; Single vs. Multiple Response; Ranked Responses and Rated Responses (Likert scales).
4. **Translation**: Seventy-nine questions over three questionnaires have been translated into Arabic and worded in a concise and unambiguous manner. Leading questions were also avoided. Vocabularies and terms were standardised across the questions and the proposed answers for consistency (see Appendix 9.1, 9.2 and 9.3). The questionnaires were

translated by the researcher and linguistically revised by an ITI (Institute for Translation and Interpreting) -accredited translator.

5. **Validity**: Validity refers to the credibility of the research. Prior to distributing the pilot questionnaire, the researcher shared the questionnaires and the research objectives with professional colleagues in Egypt who have extensive experience in the field of education and statistics (see Table 4, 'Profile of the Professional Colleagues'), in order for them to complete the questionnaire for a pre-test and to reflect on content validity. Their responses were used to further refine the questionnaires. As a result, several questions were reworded to eliminate any ambiguity. The feedback from the professional colleagues contributed to the quality of the questionnaires. For instance, they pointed out the need for a question that allows participants to reflect on the positive aspects of Egyptian higher education. Hence the questions UG Q28, PG Q26 and ACA Q23 have been modified/ added to the questionnaires.

Table 4: Profile of the Professional Colleagues

	Title	**Field of Specialisation**	**Affiliation**	**Place**
1	Professor	Statistics	Public University	Cairo
2	Senior Lecturer	Education	Public University	Cairo
3	Senior Program Officer	Education	International Organisation	Cairo

There are two aspects of validity: internal validity for ensuring that the procedures used in the research measured what they were supposed to measure. Questionnaire pre-testing helped ensure that the findings fall within the remit of the research objectives. On the other hand, external validity ensures that the results can be generalized beyond the sample of the study. In order to have external validity, a stratified sample is designed to consist of five categories and fourteen sub-categories to ensure an appropriate representation of the population. Hence, if the study were to be done a second time, it would yield the same findings.

6. **Reliability**: After the questionnaire had been refined, the researcher pretested the questionnaires a second time and discussed with two experts at the 'Project Management Unit for Higher Education Development' their thoughts/ views on the representation of the population, the consistency of the content and the questionnaire as a reliable instrument for data collection from students and academics. Further comments were received from the two experts who contributed to eliminate some elements of ambiguity.

   On the other hand, Cronbach's alpha coefficient has been used to assess the reliability (internal consistency) of the scale items (questions) of the UG, PG and Academics questionnaires (Spiliotopoulou, 2009). Cronbach's alpha (α) is a numerical coefficient that varies from 0 to 1. It is deemed that an alpha coefficient of 0.70 or higher is an acceptable value for the internal consistency, whereas 0.80 or higher denotes good reliability. Bland & Altman (1997) assert that an alpha value between 0.90 and 0.95 is desirable, since it reflects a higher level of internal consistency. Table 5 shows the Cronbach's alpha (α) coefficient for the UG, PG and Academics questionnaires.

Table 5: Reliability test results

Questionnaire	**Scale items (k)**	**Cronbach's Alpha (α) Coefficient**
Undergraduates	82	0.95
Postgraduates	82	0.94
Academics	67	0.89

The questionnaires data were exported from SurveyMonkey in form of Excel sheets containing the data in numeric values to produce the Cronbach's alpha (α) coefficient for the UG, PG and Academics questionnaires on SPSS application according to the following equation (*Using and Interpreting Cronbach's Alpha*, 2016).

Equation 2: Cronbach's alpha (α) coefficient

$$\alpha = \left(\frac{k}{k-1}\right) * \left(1 - \frac{\sum_{i=1}^{k} \sigma_{y_i}^2}{\sigma_x^2}\right)$$

$k =$ number of scale items (questions)
$\sigma_{y_i}^2 =$ variance associated with item i
$\sigma_x^2 =$ variance associated with the observed total scores

7. **Pilot Study**: A pilot study was conducted over 44 students and 15 academics who are affiliated to Tanta University, The German University and El-Shorouk Academy. Table 4 ('Distribution of Students and Academics') below demonstrates the distribution of the student and academics across selected HEIs. The questionnaires were handed to the participants in a printed form and collected at the end of the day. The participants were advised to write comments next to the unclear questions/answer choices and asked for their feedback/comments when they handed the questionnaires back. Prior to distributing the pilot questionnaire, the researcher shared it with professional colleagues in Egypt to elicit their views and feedback.

   The selection of the targeted institutions was based on the researcher's personal connections. It is worth mentioning that the researcher did not receive a response from a considerable number of universities and other HEIs to conduct the pilot study. Hence, the researcher considered using an online questionnaire for data collection and utilising social media for distributing he questionnaires.

   The pilot study was essential to ensure that the questions are clearly understood and collect the required information for meeting the research objectives, as well as to ensure that the answer choices are relevant and cover all possible responses.

Table 6: Distribution of Students and Academics (pilot study)

University	**PG**	**UG**	**Academics**	**Faculty/ Department**	**University Type**	**City**
Tanta University	5	14	7	Medicine	Public	Tanta
The German University	3	9	3	Business Administration	Private	Cairo
El-Shorouk Academy	-	12	5	Engineering	Private	Cairo

The feedback from the pilot participants contributed to the quality of the questionnaires. All the received comments have been considered in terms of content, layout or sequence of questions. For instance, the pilot

participants added and improved the answer choices for both the question number 23 (undergraduate questionnaire) on the top three reasons for enrolling at a university and the question number 22 (postgraduate questionnaire) on the top three reasons for pursing a postgraduate study. They also pointed out to issues related to non-home students.

It should be noted that the pilot study contributed significantly to developing the research questions.

4.3.3. Designing process of Semi-Structured Interviews

The semi-structured interviews were derived from the research questions and the objective of this research and mapped to the relevant interview phase (see Table 7, 'Mapping the Interviews' Questions to the Relevant Interview Set'). An update to the initial interview structure was made to accommodate previously unconsidered data collected from earlier questionnaires with academics and students. The sequence of delivering the interview questions was designed to ensure smooth and spontaneous conversation as well as full exploration of the interview topics. This also allowed the interviewee to expand and explain further.

The research was developed into five stages that were mapped to the aims and objectives to ensure that all questions either in the questionnaires or in the interviews are rationally interconnected with aims and objectives of this research for a cohesive design and the generation of relevant findings (see Figure 15, 'Mapping Research Stages to Research Objectives').

Table 7: Mapping the Interviews' Questions to the Relevant Interview Set

Questions	PIF	OFF	SME
1. Do you believe the Government of Egypt has a real intention to reform higher education?	x		
2. What is the national strategy for higher education in Egypt?		x	
3. What is the impact of recent political changes in Egypt on the reform of higher education?	x	x	x
4. Are there possible routes for reforming Higher Education without having to wait to secure large investments or to be in a position to make long-term commitments?	x	x	x
5. What is your vision of higher education in Egypt?	x		
6. Are there prerequisites for the reform of higher education in Egypt? For instance, are freedoms and democracy prerequisites or are they a probable outcome of reform in a developing country like Egypt?	x	x	x
7. Is there a competition between international organisations in leading higher education reformation in the less-developed countries?			x
8. Do you believe these international organisations have the same internal logic with different strategies, or totally different motivations?			x
9. None of the identified problems are new to the Egyptian Government, so what is the purpose of the review for both the Egyptian Government and the OECD / the World Bank?		x	x
10. How can the recommendations of the OECD Review contribute to sustainable development of Egypt? And how can this contribution be measured?		x	x
11. Is there a potential risk that may occur in the reform processes?		x	x
12. How do knowledge production and circulation work within higher education in Egypt?	x		
13. Are obstacles and opportunities in reforming higher education country-specific?			x
14. What should be the role of Higher Education in less-developed countries?			x
15. How can the reform of higher education in Egypt be sustainable?		x	x
16. What is the role of higher education in Egypt?	x		
17. Which model (neo-liberal/state-centric) of reforming higher education for a knowledge economy fits the less-developed countries?			x
18. What model does the OECD propose for reforming higher education in Egypt?			x
19. Apart from the education and economic dimensions, are there other aspects that need to be considered (e.g. cultural, social) in reforming higher education in Egypt?	x	x	x
20. In your opinion, what are the major problems of higher education in Egypt?	x		
21. What do you think are the main reasons that have led to the deterioration of higher education in Egypt?	x		
22. What are the priorities for reforming higher education in Egypt?	x	x	x

4.4. Research Design

In seeking to address the research questions, an exploratory study was designed using a mixed methods model within the framework of the

transformative paradigm (see Figure 16, 'Transformative Framework') with the aim of increasing the credibility and validity of the findings through examining the same issues using different methods. It also allowed for a deep understanding of the findings. The use of mixed methods in this research was indispensable to attain a comprehensive understanding of the obstacles and opportunities that influence the reform of higher education in Egypt. Other dimensions of the research problem may have been undetected using a single research method. For understanding the development of higher education, Morgan and Wu (2011, p.7) emphasised that a high priority in research practice should be given to "*empirical surveys and qualitative methods to bring together the voices, opinions, needs, and suggestions of all stakeholders*".

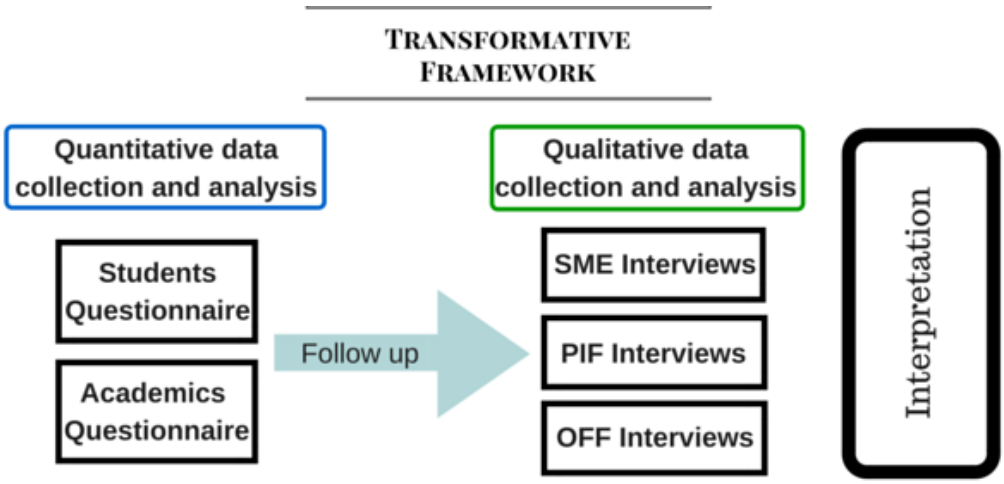

Figure 16: Transformative Framework

Von Zweck (2008) points to the unique benefits and strengths of quantitative and qualitative approaches, which can be used together to study various aspects of the same phenomenon, and to reach a deeper and more comprehensive understanding of the phenomenon. Quantitative methods are suitable for identifying and measuring variables in order to "*predict, control, describe, generalize, test hypotheses, and/or identify cause-effect relationships*" (Higgs, 2001 cited in von Zweck, 2008, p.121), while qualitative approaches are more suitable to look at individuals within a social context, and provide insight into their beliefs and value systems. However, relying only on a mono-method qualitative approach will limit the ability to represent complexity and diversity due to small sample size (De Lisle, 2011). Thus, an integration of diversified data sets in mixed methods strategies augments transferability and

generalizability of the conclusions (Onwuegbuzie & Leech, 2004, cited in De Lisle, 2011). This diversification of quantitative and qualitative methods facilitates the study of stakeholders at different levels (students, academics, officials, subject matter experts and prominent intellectual figures) either at macro level or micro level within the higher education system in Egypt.

In comparing between quantitative and qualitative approaches (see Table 8, 'Comparison of quantitative and qualitative methods'), Marshall (1996, p.522) stated that *"(the) choice between quantitative and qualitative research methods should be determined by the research question, not by the preference of the researcher*". While quantitative methods answer more mechanistic 'what?' questions and investigate pre-determined hypotheses to produce generalisable results, qualitative studies answer the more humanistic 'why?' and 'how?' by shedding light on complex social and cultural issues (Marshall, 1996). The nature of the present research problem imposed certain research questions that require answers to the actual cause of the problem and how the problem is perceived by different parties with different interests.

Table 8: "Comparison of quantitative and qualitative methods" (Marshall, 1996)

	Quantitative	**Qualitative**
Philosophical foundation	Deductive, reductionalist	Inductive, holistic
Aim	To test pre-set hypothesis	To explore complex human issues
Study plan	Step-wise, predetermined	Iterative, flexible
Position of researcher	Aims to be detached and objective	Integral part of research process
Assessing quality of outcomes	Direct tests of validity and reliability using statistics	Indirect quality assurance methods of trustworthiness
Measures of utility of results	Generalizability	Transferability

On the other hand, the mixed-methods approach overcomes the drawbacks of both quantitative and qualitative research, namely the weakness in understanding the context and the difficulty in generalising the findings to the population, respectively (Creswell & Plano Clark, 2011). Furthermore, a mixed-methods design is an appropriate strategy as it utilises all approaches to form a complex picture of a phenomenon, that may allow for expansion and analytical generalisation to other less-developed countries, as well as the retention of

holistic and meaningful characteristics of the reform of higher education in Egypt (Yin, 2003).

The fieldwork was an essential part of this research, with an aim of exploring the problems identified in the OECD review on Egypt of 2010 and the questions raised in this research project, primarily targeting higher education stakeholders across HEIs in Egypt. A dimensional sampling technique has been used to strengthen the results of the study. Egypt, with its unique setting, is the subject of the study since it represents diverse geographic, cultural, social, economic and political groups, at least some of which overlap with other less-developed countries in the region. This has helped the researcher to analytically unravel key concerns or dimensions of the reform of higher education in Egypt that are highly pertinent to other less-developed countries (e.g. Arab, African). Key dimensions include the IGOs' internal logic in supporting higher education in less-developed countries, the role of higher education, higher education reform models, and knowledge with its associated concepts of knowledge economy and society.

In this research, higher education in Egypt is the phenomenon, which has been studied as a whole in terms of its role and through its components to include institutions, policies and stakeholders. This necessitated the collection of both quantitative and qualitative data from stakeholders, reflecting experiences, perceptions and beliefs. The decision was then made to consolidate both qualitative and quantitative findings, analysis and discussion to capitalise on the hermeneutics method for a holistic overview of the problem as well as a deep understanding of its components. Indeed, continual readings and analysis of such data allowed for a deeper understanding of the nature of higher education in Egypt within the social, cultural, economic and political context and through the experiences and perspectives of the stakeholders.

It was essential to make certain that the data collected fully addresses the initial research objectives. Hence, the design of this research is constructed around the research objectives using a mixed methods approach. Mixed methods attempt to bring together different methodological approaches that become the source of different ways of conceptualising the research problem on both ontological and epistemological aspects (Higgs, 2001 cited in von Zweck,

2008). This integration of qualitative with quantitative methods is utilised along with the hermeneutics method in a research process model that provides an interpretive approach from different points of view (Spratt, 2004).

Quantitative data can reflect an occurred variance, while qualitative data can help interpret that variance. However, the emphasis was maintained on the qualitative methods since a considerable part of this research explores a variety of experiences and perspectives on the status and the reform of higher education in Egypt. De Lisle (2011, p.87) argued that "*such designs, in which the qualitative is lead or dominant, are most useful for exploring complex and multiplex issues of education*".

Qualitative methods reflect the socially constructed realities and the complex nature of social phenomena. However, they cannot replace the need for further structural analysis through quantitative methods (Creswell & Plano Clark, 2011). This study relied on an integration of both qualitative and quantitative methods throughout. Qualitative data focused on the views of a variety of stakeholders, such as officials, subject matter experts and prominent intellectual figures on the reform of higher education in Egypt. These were then complemented by quantitative data obtained from a survey of undergraduate and postgraduate students as well as academics. The surveys, which were primarily made up of rating scales, also provided qualitative data in the form of open-ended questions. When describing the quantitative findings, these data were then transformed into a qualitative narrative. An exploratory strategy was adopted to interpret qualitative findings within the context of quantitative results. Depending on the nature of a study, one approach is usually given priority, then supplemented and enhanced by the other. The mixed methods of this research are qualitatively-driven mixed methods that allow for the complexity of the role of higher education in a less-developed country (i.e. Egypt) to be captured, along with the perception of higher education reform at multiple levels (Creswell, Shope, Plano Clark & Green, 2006, cited in De Lisle, 2011). As Marshall (1996, p.524) states, *"(understanding) of complex human issues is more important than generalizability of results".*

The reform of higher education can be looked at from several different viewpoints, either from global angles of various IGOs or from miscellaneous

local points of view. The hermeneutics method (see Figure 17, 'The Method Of Alternating Point Of View') has been used as a model for the qualitative analysis to deepen the understanding and reveal new dimensions to the topic (Routio, 2007) as well as a strategy to address a wide range of intersecting issues of higher education (e.g. expansion, quality, student demand, job market, university role, etc.), as it is a method that is flexible and effective for gathering and interpreting information from a range of sources (von Zweck, 2008).

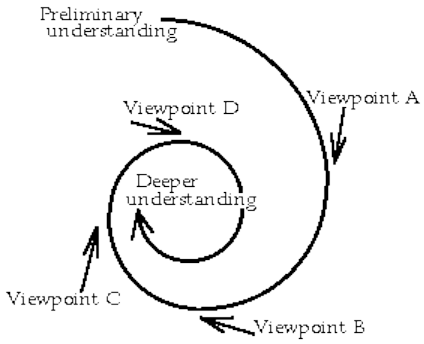

Figure 17: The Method Of Alternating Point Of View

Within the context of the conceptual framework (Section 3.9), reconciliation state, society and market, hermeneutics was used to discuss and reconcile the perspectives that students, academics, officials, prominent intellectual figures and other stakeholders stated on the same issue (see Chapter 6, 'Discussion'). Furthermore, the interaction across the three dimensions ('State', 'Society' and 'Market') over various issues on higher education produced multiple sets of viewpoints on the same issue (in some cases). For instance, the expansion of higher education has a set of viewpoints that represent the stakeholders, whereas public and private higher education expansion each has its own set of viewpoints. On the other hand, non-profit and for-profit private higher education expansion each has its own set of viewpoints. Koch (1996 cited in von Zweck, 2008, p.119) describes the premise of hermeneutics as being "*that people are self-interpreting and therefore engage in a process to understand what is important and real for them in order to create their own construction of reality*". In the provided example of multiple sets of viewpoints, there are multiple realities for the same issue according to a selected adjustment within the state, society and market dimensions of the conceptual framework.

Attention is given to the interpretation of the qualitative data and comprehending this information within the wider data analysis and discussion, to advance an understanding from different points of view for every issue that affects the reform of higher education. "*Essential constructs that underlie philosophical hermeneutics were described by Gadamer (1981) as metaphors and included the hermeneutic circle, dialogue, and fusion of horizons*" (Weinsheimer, 1985 cited in von Zweck, 2008, p.118), as the hermeneutic circle ultimately views a phenomenon as a whole and as components to accumulate knowledge for an enhanced understanding of the experience. Dialogue represents the relation between the researcher and the text whereby a deep understanding of perceptions, beliefs, attitudes, practice, and attempts to implement change is reached through continual readings, analysis and by answering the questions raised. Fusion of Horizons refers to the combination of experiences and perspectives (von Zweck, 2008).

The hermeneutic, interpretive approach was found to be most appropriate to provide an understanding of the wide-ranging experiences, practices, attitudes, views and issues affecting the reform of higher education. This approach gains knowledge from experiences by describing, analysing and seeking to understand them (Higgs, 2001 cited in von Zweck 2008). Reality is constructed by means of reflecting on the reform of higher education through students, academics, officials, subject matter experts and prominent intellectual figures (Crotty, 1998; Dilthey, 1988 cited in von Zweck 2008).

An initial analysis of the OECD 2010 report on Higher Education in Egypt reveals the need for a deeper understanding of higher education reform in Egypt and the ambiguity of the OECD's internal logic for less-developed countries. Further reviews of the OECD 2010 report in light of new data/information collected from different perspectives, added a great value to understanding the issues on the reform of higher education.

4.5. Data Collection

The model of reforming higher education proposed by international organisations (i.e. World Bank and OECD) is driven and developed within the knowledge economy framework. As per the earlier discussion in section 3.8

('Knowledge Economy and Knowledge Society Frameworks'), the higher education indicator is solely based on the gross rate of enrolment, which contributes to the knowledge economy index.

The model is based on the assumption that the expansion of higher education will lead to an intensity of knowledge that the economy relies on. Thus, universities, as a promising source of knowledge, need to enrol as many students as they can to feed the job market in order to enhance the economic development of a nation. A higher enrolment rate among higher education indicators does not necessarily reflect the quality or the social and cultural goals of higher education in a country.

Therefore, it was necessary for the data collection to yield appropriate and sufficient data among other data on the stakeholder perceptions of the status of higher education in terms of education quality, enrolment, job prospects, student distribution, student demand versus job market demand, the reform of higher education and the university role as explained in the 'Research Objectives' (Section 1.5.2). The data collection also included the perspectives of subject matter experts and prominent intellectual figures on the reform of higher education in Egypt as well as the official point of view.

The conceptual framework influenced the use of a mixed methods approach for data collection. The state, society and market dimensions are represented by the officials; students, academics and PIFs; and SMEs respectively. Hence, the conceptual framework guided the sources of data, namely officials' interviews, students and academics questionnaires, PIFs' interviews and SMEs' interviews, whereas the criteria of the dimensions along with associated issues of higher education guided the data type. The data collection is constructed according to the types of information needed to answer the research questions. A combination of two parallel procedures was used to collect the data: Self-administered questionnaires and semi-structured interviews. The table below summarises the desired kind of information, information source, and method of data collection for each phase of the study.

Table 9: Data Collection & Research Stages

Phase	Required Information (purpose)	Information Source	Data Collection Method
One	Perception of higher education. Teaching, learning and research needs. Identification of the social, political and economic context of higher education. Identification of reform components with high impact on the economy and society.	HE Students	Questionnaire
Two	Perception of higher education and its role. Teaching, learning and research needs. Identification of the social, political and economic context of higher education. Identification of reform components with high impact on the economy and society.	HE Academics	Questionnaire
Three	Perception of higher education and its role. Identification of the social, political and economic context of higher education. Identification of reform components with high impact on the economy and society.	Prominent Intellectual Figures	Interview
Four	Perception of higher education in Egypt and the adopted reform model. Identification of the internal logic of IGOs in introducing certain reform models for less developed countries.	OECD and UNESCO	Interview
Five	Perception of higher education and its reform. Teaching, learning and research needs. Identification of the social, political and economic context of higher education. Higher Education plans and strategies.	Officials	Interview

The timeline below reflects the stages of the data collection over a period of time, demonstrating the links between these stages. The data collection started with the PIFs' interviews and ended with the officials' interviews. The interviews with the PIFs paved the road to the other interviews with the SMEs and the officials respectively, as their perspective represents, to some extent, the societal perceptions and views, whereas the perspectives of both PIFs and SMEs guided the interviews with the officials. On the other hand, the students and academics questionnaires ran parallel. However, the academics' perspectives partially contributed to the interviews with the officials (i.e. quality assurance programme).

Figure 18: Data Collection Timeline

4.5.1. Stage 1 (Students' Questionnaires)

This research surveyed the perception of higher education and teaching, learning and research of a sample of higher education students, both undergraduates and postgraduates. Use has been made of questionnaires to obtain mainly quantitative data from higher education students. The gathering of quantitative data remains indispensable as one of the primary methods for gathering evidence on higher education students in both public and private institutions that are located in different geographical areas in Egypt. It was therefore appropriate to obtain quantitative data through a survey.

Undergraduate and postgraduate students as well as academics were reached through posts on the websites of the Egyptian universities, in coordination with the ICT Project (MoHE), whereby links were provided to direct students and academics to the relevant questionnaire on the 'SurveyMonkey' website[4].

Additionally, Facebook user groups associated with Egyptian universities were identified and utilised to target higher education students in Egypt for the questionnaire. The number of students in the identified Facebook groups is over 836,000 (see Appendix 9.8, 'Targeted Facebook Groups').

The online questionnaire tool SurveyMonkey was utilised for hosting the questionnaires and for collecting data. Both undergraduate students and postgraduate students' questionnaires were available online from December 2012 until March 2013 inclusive. However, the undergraduate students' questionnaire reopened again in December 2013 for a month to increase the number of responses (see Figure 19, 'Undergraduate Questionnaire Responses Duration'). The responses during this month increased by over 150%.

[4] https://www.surveymonkey.com

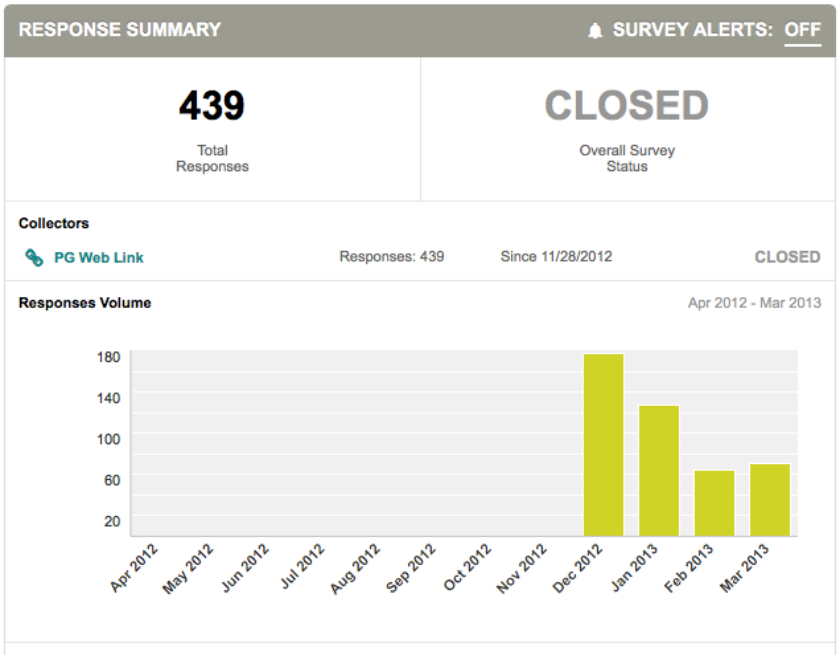

Figure 19: Postgraduate Questionnaire Responses Duration

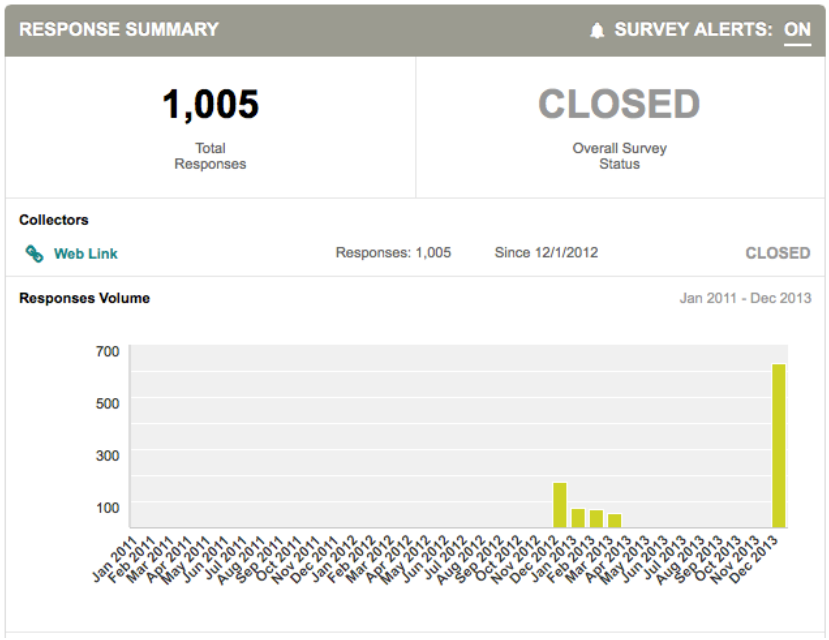

Figure 20: Undergraduate Questionnaire Responses Duration

The actual valid number of responses from postgraduate students was 233 (450 anticipated responses). At a confidence level of 95%, the actual valid response of the postgraduate students has a confidence interval (margin of error) of ± 6.42%, which is higher than the anticipated confidence interval: ± 4.62%. In contrast, the actual valid response of undergraduate students was 577 (510 anticipated responses). At a confidence level of 95%, the actual valid response of the undergraduate students has a confidence interval of ± 4.08%, which is slightly lower than the anticipated confidence interval of ± 4.34%.

Table 10: Anticipated, Actual and Valid Responses with Confidence Intervals (Students)

Confidence Level 95%	Anticipated Responses	Actual Responses	Valid Responses
Postgraduates	450	439	233 (± 6.42%)
Undergraduates	510	1005	577 (± 4.08%)

It is worth mentioning that the following steps were taken in order to maximise the number of responses received and consequently increase the validity and the reliability:

- A pilot questionnaire (see Section 4.3.2, 'Designing Process of Self-Administered Questionnaires') was distributed among a limited number of students and academics to identify any drawbacks in the design. All the provided comments were considered, especially those comments related to possible misunderstanding of certain questions.
- User groups on social media (i.e. Facebook) were identified and utilised to target higher education students in Egypt (see Appendix 9.8, 'Targeted Facebook Groups'). Appropriate keywords (i.e. university name, in both Arabic and English) were used to identify relevant user groups through systematic searches on Facebook, and the relevancy to an Egyptian HEI was then verified through the description of the group.
- The availability period of the online questionnaire on SurveyMonkey was increased and the questionnaire links were sent to the administrators for posting on the identified user groups. Responses are concentrated in certain months when the reminders were sent (see Figures 19, 20 and 22 for response durations).
- The questionnaires (see Appendix 9.1, 9.2 and 9.3) were translated into Arabic and worded in a clear and unambiguous manner, and appropriate scales were used in the responses. Leading questions were avoided. The feedback from the pilot questionnaire contributed to the quality of the questionnaire.
- Participants were informed in advance of the amount of time the questionnaire was expected to take (10–15 minutes).

- The purposes of the questionnaires were explained to the participants on an introductory page (see Appendix 9.11), which also included information on how the collated information would be used.

4.5.2. Stage 2 (Academics' Questionnaires)

The academics' questionnaire stage focused on the perception of higher education and teaching, learning and research issues of a sample of academics at the HEIs in Egypt. The purpose of this questionnaire was to elicit academics' current views and attitudes towards higher education and its reform plans, as well as the role of higher education. The questionnaire included open-ended questions, which encouraged them to freely explore their perspectives.

The questions were structured into sections similar, to a great extent, to the students' questionnaires, which allowed comparing the academics and students views (see Table 3, 'Thematic Structure of the Questionnaires'). Certain questions were also similar to PIF and SME questions, such as questions on the role of higher education and the priorities of the reform.

Figure 22 ('Mapping Questionnaires' Themes to the Research Objectives') demonstrates how the thematic structures of the questionnaires (academics and students) were derived from the research objectives to ensure the relevance of the collected data to the research questions.

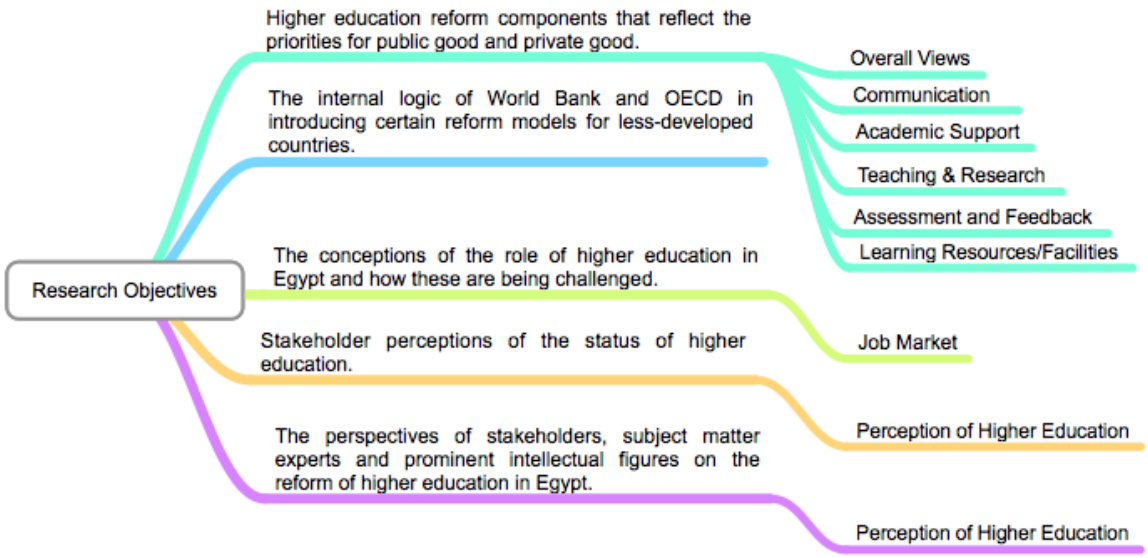

Figure 21: Mapping Questionnaires' Themes to the Research Objectives

Certain user groups on social media (i.e. Facebook) were then identified and utilised to target academics at higher education in Egypt for the academics' questionnaire. Appropriate keywords (i.e. university name, in both Arabic and English) were used in a systematic search to identify relevant user groups on Facebook in a similar manner to the student search described above.

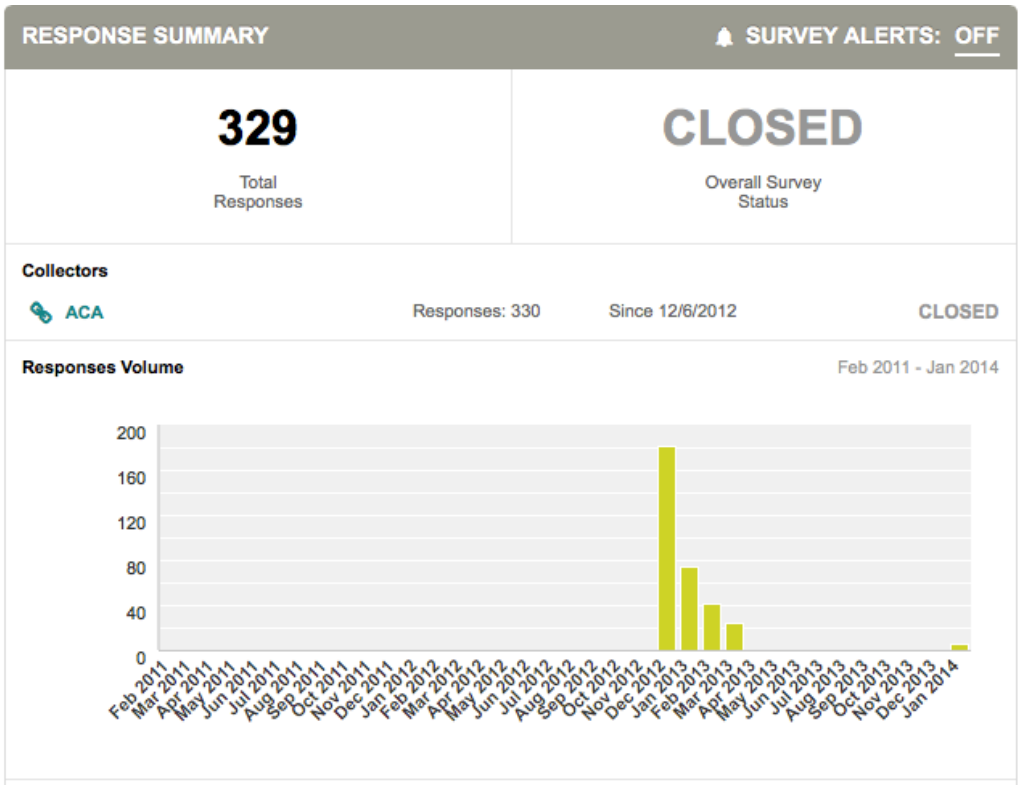

Figure 22: Academics Questionnaire Responses Duration

The survey creation site SurveyMonkey was utilised for hosting questionnaires and collecting data. The academics' questionnaire was available online from December 2012 until March 2013 inclusive and reopened again in January 2014 for a month to increase the number of responses (see Figure 22, 'Academics Questionnaire Responses Duration'). However, the increment in the total number of responses was only modest.

The actual valid response of academics was 223 (360 anticipated responses). At a confidence level of 95%, the actual valid response of the academics attracts a confidence interval of ± 6.56%, which is higher than the confidence interval of the anticipated responses ± 5.17%. The same procedures followed in order to increase the response rates for students' questionnaires were followed here too.

Table 11: Anticipated, Actual and Valid Responses with Confidence Intervals (Academics)

Confidence Level 95%	Anticipated Responses	Actual Responses	Valid Responses
Academics	360	329	223 (± 6.56%)

4.5.3. Stage 3 (PIFs' Interviews)

A set of interviews was conducted with prominent intellectual figures (see Table 12, 'Interviews with PIFs') in Egypt that is primarily focused on the perception of higher education reform to complement data collected from the surveys and other interviews with the officials and subject matter experts of international organisations.

Table 12: Interviews with Prominent Intellectual Figures

Interviewee	Title	Type	Date	Language	Frequency	Length (mins)	Place
PIF1	Former PM	F/F[5]	19/08/2012	Arabic	1	79	Cairo
PIF2	Emeritus Professor	F/F	01/04/2013	Arabic	1	39	Cairo

The purpose of this set of interviews was to elicit interviewees' current views and attitudes, that reflect to a great extent society's sentiments towards higher education in Egypt and its reform plans by asking a series of general open-ended questions, which encourage them to freely explore their perspectives with minimal guidance from the researcher.

Since the prominent intellectual figures are usually familiar with public interest matters, but are not necessary specialised in higher education, the interview questions were submitted to the interviewees prior to the start of each interview to provide them with ample time to formulate their thoughts on the topic.

To ensure that the interviewees' responses are genuine and well-conceived and to enhance the validity of the overall study, the findings from these interviews

[5] Face to face interview.

were examined against the findings from the surveys and other interviews as a means of triangulation.

The interview questions were mapped from the research objectives in an attempt to elicit the interviewees' views on the reform of higher education in Egypt. Each interview was conducted face-to-face and consents were obtained from interviewees to record and transcribe the interviews verbatim. Figure 24 ('Mapping PIFs Interview Questions on Research Objectives') demonstrates how the interview questions were derived from the research objectives to ensure the relevance of the collected data within the framework of the research questions. Table 5 ('Mapping the Interviews' Questions to the Relevant Interview Set') shows how this set (PIF) of questions relates to other sets (i.e. SME and OFF) of interview questions.

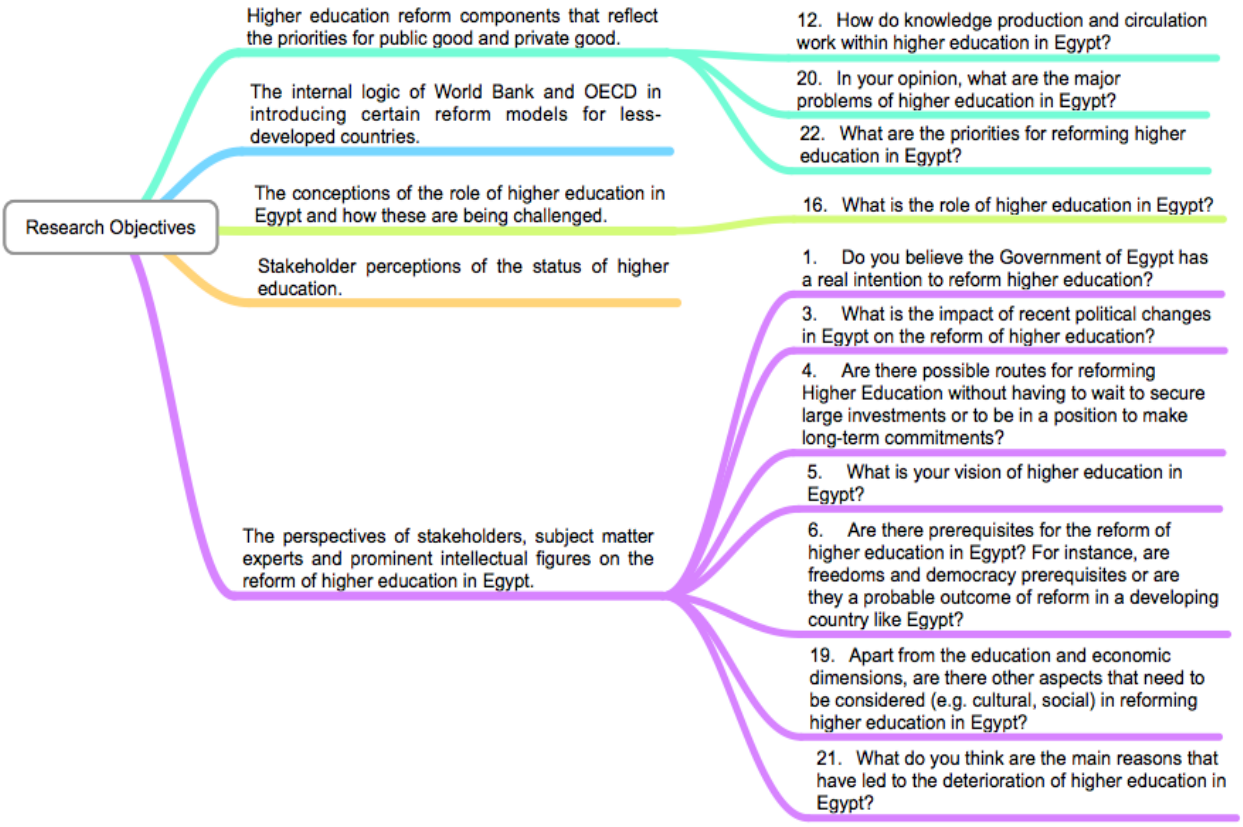

Figure 23 Mapping PIFs Interview Questions on Research Objectives

4.5.4. Stage 4 (SMEs' Interviews)

Another set of interviews was conducted with subject matter experts (see Table 13, 'Interviews with SMEs') from international organisations (i.e. OECD and

UNESCO) to complement data collected from the surveys and other interviews with officials and prominent intellectual figures in Egypt. The purpose of this set of interviews was to elicit interviewees' current views on the reform of higher education as well as on the internal logic of the international organisations in supporting the reform of higher education in less-developed countries. This set of interviews demonstrated the variations in the views of international organisations in terms of the reform of higher education in the less-developed countries as well as the approach to the reform.

Table 13: Interviews with Subject Matter Experts

Interviewee	Affiliation	Type	Date	Language	Frequency	Length (mins)	Place
SME1	OECD	F/F[6]	10/04/2013	English	1	60	Paris
SME2	OECD	F/F	10/04/2013	English	1	60	Paris
SME3	UNESCO	F/F	09/04/2013	English	1	45	Paris
SME4	UNESCO	F/F	09/04/2013	English	1	45	Paris

The semi-structured interviews (See Appendix 9.4) were derived from the research questions and the objective of this research. An update to the initial interview structure was made to accommodate previously unconsidered data collected from earlier questionnaires with academics and students. The sequence of delivering the interview questions was designed to ensure smooth and spontaneous conversation as well as in-depth discussion of the interview topics. This also allowed the interviewee to expand and explain further.

Each interview was conducted face to face and, as previously, consent was always obtained from interviewees to record and transcribe the interviews verbatim. Figure 25 ('Mapping SMEs Interview Questions on Research Objectives') demonstrates how the interview questions were derived from the research objectives to ensure the relevance of the collected data within the framework of the research questions. Table 5 ('Mapping the Interviews'

[6] Face to face interview.

Questions to the Relevant Interview Set') shows how this set (SME) of questions relates to other sets (i.e. PIF and OFF) of interview questions.

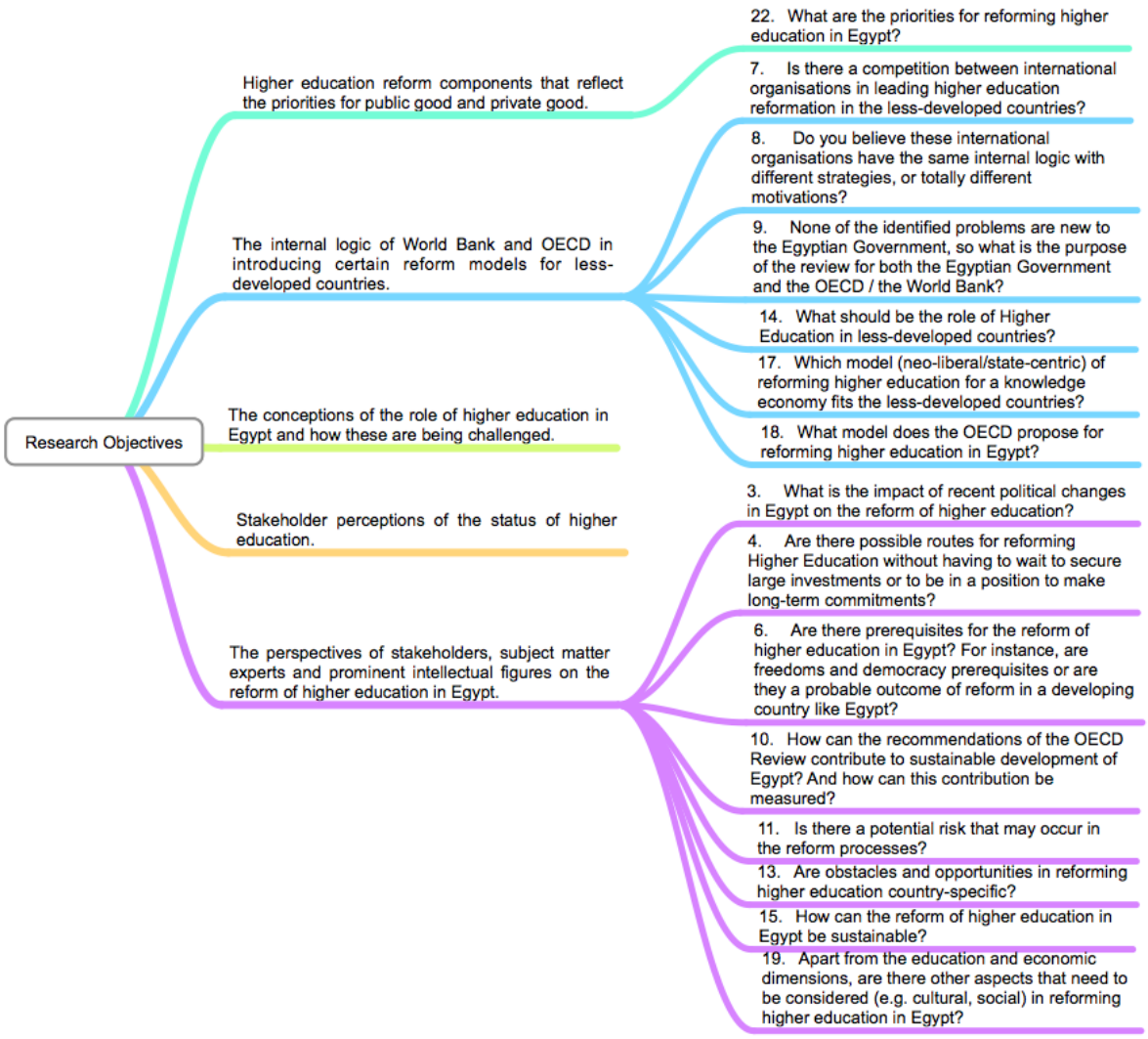

Figure 24 Mapping SMEs Interview Questions on Research Objectives

4.5.5. Stage 5 (Officials' Interviews)

Another set of interviews was also conducted with senior officials (see Table 14, 'Interviews with OFFs') at the Higher Education Development Program, MoHE and the NAQAAE to complement data collected from the surveys and other interviews with the prominent intellectual figures and the subject matter experts of International organisations. The semi-structured questions were derived from the research questions, the aims and the objectives of this research. An update to the initial interview structure was made to accommodate previously unconsidered data collected from previous questionnaires with academics and students and interviews with the subject matter experts and the prominent intellectual figures in Egypt.

Table 14: Interviews with Officials

Interviewee	Affiliation	Type	Date	Language	Frequency	Length (mins)	Place
OFF1	NAQAAE	F/F[7]	11/11/2014	Arabic	1	35	Cairo
OFF2	MoHE	F/F	14/11/2014	Arabic	1	25	Cairo

The purpose of this set of interviews was to elicit officials' current views and attitudes towards reform of higher education in Egypt by asking a series of general open-ended questions, which encouraged them to explore freely their perspectives with minimal guidance from the researcher.

The interview questions were derived from the research objectives in an attempt to elicit the interviewees' views on the reform of higher education in Egypt. Interviews were conducted face-to-face and, as previously, consents were sought from interviewees.

Figure 26 ('Mapping SMEs Interview Questions on Research Objectives') demonstrates how the interview questions were derived from the research objectives to ensure the relevance of the collected data within the framework of the research questions. Table 5 ('Mapping the Interviews' Questions to the Relevant Interview Set') shows how this set (OFF) of questions relates to other sets (i.e. PIF and SME) of interview questions.

[7] Face to face interview.

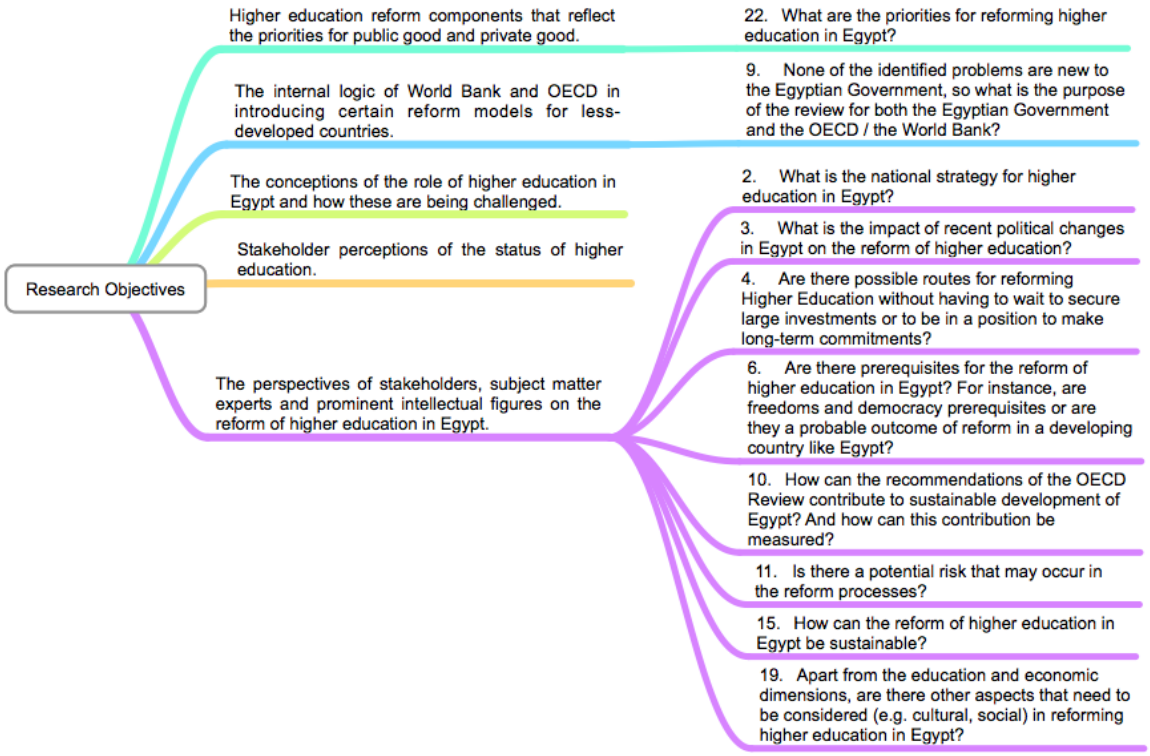

Figure 25 Mapping Officials Interview Questions on Research Objectives

The interview stages were conducted in the above sequence to allow the prominent intellectual figures to reflect on the subject matter experts' views, and the officials to respond to both the subject matter experts and the prominent intellectual figures.

All interviews and the questionnaires were guided by data collection strategies delineated for qualitative methods. Interviews were recorded, transcribed verbatim and where applicable, translated into English. The interviews with the prominent intellectual figures and the officials were conducted in Arabic, while the interviews with the subject matter experts at the international organisations were conducted in English.

4.6. Data Analysis

The conceptual framework of reconciliation of state, society and market influenced the source and type of the collected data (see Section 4.5, 'Data Collection), since the society dimension is represented by the students, academics and PIFs, whereas the state and market dimensions are represented by the officials and SMEs, respectively. Hence, the analysis of data was conducted in two parallel phases to accommodate both quantitative data (students and academics questionnaires) and qualitative data (PIFs, officials

and SMEs interviews). A dedicated specialised platform was used for each data type. SPSS was used to analyse quantitative data whereas MAX-QDA (MAX Qualitative Data Analysis) was used to analyse qualitative data that had been collected from interviews, open-ended questionnaire questions and key documents of the MoHE and international organisations (e.g. OECD, UNESCO, UNDP, World Bank).

4.6.1. Quantitative Data Analysis

SurveyMonkey was used for data collection where data were entered directly into the database. The quantitative data were exported in form of Excel sheets containing the data in numeric values rather than actual values, so additional computation can be made on a specialised platform. SPSS platform was used for computing both descriptive statistics and inferential statistics (Mann-Whitney test, Kruskal-Wallis test, Cronbach's coefficient, Kolmogorov-Smirnov and Shapiro-Wilks).

Data were checked carefully for errors to eliminate all invalid data or incomplete responses. This data cleaning process produced 223 valid responses out of 329 respondents from academics, 630 valid responses out of 1005 respondents by undergraduate students and 233 valid responses from 439 respondents by postgraduate students.

After the data cleaning process, all responses from the surveys were compiled in a series of charts to allow the examination and comparison of results side by side. Due to the similarity in a considerable number of questions for academics, undergraduate and postgraduate students, the data analysis has been grouped wherever applicable to allow for a coherent understanding of the overall perceptions of the UG students, PG students and academics. Also, this allowed demonstrating statistically significant differences and similarities across the samples through descriptive statistical tables that are based on the range of values from 1 to 5. These values represent the answering choices 'Strongly agree', 'Agree', 'Neither agree nor disagree', 'Disagree' and 'Strongly disagree' respectively. The tables are constructed from validated sample size, median, sample mean, standard deviation, confidence interval (at 95%) and the mean rank. The confidence interval has been constructed for each variable across

samples according to the following formulas:

Equation 3: Confidence interval for population mean (*μ*)

$$CI = \bar{x} \pm t^* \frac{s}{\sqrt{n}}$$

Sample mean: $\bar{x} = \frac{\sum x}{n}$

Value: x

Multiplier (t distribution table at 95%): t^*

Standard error: $SE(\bar{x}) = \frac{s}{\sqrt{n}}$

Sample size: n

Standard deviation: S= $\sqrt{\frac{\sum(x-\bar{x})^2}{df}}$

Degrees of freedom: $df = n - 1$

The general consensus among literature related to statistical tests shows that parametric analysis is more powerful and precise than its counterpart, non-parametric analysis. However, the type of data stipulates the mode of analysis. The types of data are split into nominal, ordinal, interval and ratio. As a rule of thumb, the parametric tests (e.g. ANOVA and T-Test) are utilised for interval scale data analysis between groups, as long as the data meet the underlying assumptions (e.g. normality of distribution and variances), whereas the non-parametric tests (e.g. Kruskal-Wallis and Mann-Whitney) are utilised for ordinal data as well as interval data which are not normally distributed (McCrum-Gardner, 2008). The data of this research are classified as ordinal data (Likert scale), however in practice one could argue that a symmetric Likert scale can be considered an interval scale assuming the difference between its categories are the same (Carifio & Perla, 2007).

To meet the assumptions of the parametric tests, a normality of distribution test (i.e. Kolmogorov-Smirnov and Shapiro-Wilks) has been conducted on the data. However, due to the limited capability of Kolmogorov-Smirnov and Shapiro-Wilks in dealing with a large sample size (larger than 50 as per SPSS), a considerable part of the data was heavily skewed (see Appendix 9.14, 'Tests of Normality'). There was only a minimal chance to correct the skewness, if

logarithmic transformation were to be applied to the data to justify the assumptions. It is worth mentioning that Schmider, Danay, Beyer, Bühner & Ziegler (2010) pointed out a lot of evidence for the robustness of the ANOVA, which is not receptive to the violation of normality assumption. However, it may not be reliable when the assumption of homogeneity of variance is violated too (Liu, 2015). Hence, the decision has been made to utilise the Kruskal-Wallis (H) test to check the difference and similarity among the PG, UG and Academics groups, while the Mann-Whitney (U) test is utilised to compare between any two independent groups among them.

Statistical H-test and U-test have been applied where applicable among independent samples (UG, PG and Academics) for statistically significant differences and similarities. SPSS has been utilised for computing inferential statistics (Mann-Whitney test, Kruskal-Wallis test and Chi-square test) based on the null hypothesis.

In order to validate the results of the U test and H test, certain assumptions have been met. By design, the variables are ordinal and independent for the independent groups (i.e. UG, PG and Academics). Observations are independent in each group and among the groups (i.e. different participants). It has also been assumed that the group-distributions under the null hypothesis are the same, which indicates that all groups have the same mean rank. The alternative hypothesis indicates that at least one of the groups has a different distribution shape from at least one of the other groups. This means that the group with the different distribution shape has at least a different mean rank (when all groups have the same median), otherwise both the median and the mean rank of this group are different from at least one other group.

The chi-square test for multiple comparisons is applied, once a statistically significant difference among groups was detected by the Kruskal-Wallis test. The chi-square statistic for the Kruskal-Wallis test is fairly accurate with larger sample sizes (Chan & Walmsley, 1997). It is anticipated that the chi-square statistical results of the findings are, to a great extent, accurate, since the sample size is large (i.e. 1033).

The U-test has been applied at 95% confidence intervals for the cases of two groups, assuming the group-distributions are the same. The null hypothesis for

the U-test is that the group-distributions under the null hypothesis are the same, which indicates that all groups have the same mean rank. The alternative hypothesis indicates that the two groups have different distribution shapes. This means that the groups have at least a different mean rank (when the two groups have the same median), otherwise both the median and the mean rank are different between the groups.

The calculation of U-test is based on the following formula (Tallarida & Murray, 2012).

Equation 4: U-test

$$U = n_1 n_2 + \frac{n_2(n_2+1)}{2} - \sum_{i=n_1+1}^{n_2} R_i$$

U = Mann-Whitney Test statistic

R_i = Rank of the sample

n_1 = First sample size

n_2 = Second sample size

The H test has been applied for the cases of three independent groups at 95% confidence intervals. It is assumed that the group-distributions under the null hypothesis are the same, which indicates that all groups have the same mean rank. The test statistic is adjusted for pairwise ties. So, when a significant difference is detected, multiple pairwise comparisons test (Chi-square) has been used between groups to identify the absolute difference between any two groups at designated level ($\alpha = .05$) (Chan & Walmsley, 1997). The significance values have been adjusted by Bonferroni correction for multiple tests. The alternative hypothesis indicates at least one of the groups has different distribution shape from at least one of the other groups. This means that the group with the different distribution shape has at least a different mean rank (when all groups have the same median), otherwise both the median and the mean rank of this group are different from at least one other group.

The following formulas formed the base for the H test (Chan & Walmsley, 1997, p.1759).

Equation 5: H test

$$H = \frac{12}{n(n+1)} \sum_{i=1}^{k} \frac{R_i^2}{n_i} - 3[n+1]$$

H = Kruskal-Wallis Test statistic

n = Total number of observations in all samples

k = Number of samples

R_i = Rank of sample

The next step was to detect if there is a variation in each variable of interest. These variables were derived initially from the first section ('Essential Information') of the questionnaires (see appendices 9.1, 9.2 and 9.3).

Table 15: Variables from 'Essential Information'

Academics	**Undergraduate Students**	**Postgraduate Students**
University Type	University Type	University Type
Gender	Gender	Gender
Academic Rank	Degree	Degree
Attitude	Home City	Home City
	Private Tuition	Private Tuition
	Higher Fees	

The variables included the type of university in terms of private or public university, the subject area of study or research (Arts and Humanities, Social Science and Science & Engineering), geographical location, gender and the category of student or academic (academic rank and degree). When variation is detected, cross-tabulation data has been presented in separate tables to facilitate the direct comparison and the identification of similarities and differences across universities and other HEIs.

4.6.2. Qualitative Data Analysis

Qualitative data analysis involved coding interview transcripts, open-ended questionnaire questions and the key documents into the MAX-QDA platform that identifies similarities, differences and relations between segments of text across documents and texts (see Section 4.8.4 'Confirmability'). The generated themes/codes were not only essential for the analysis of the qualitative data

(see Figure 26, ‘Qualitative Codes’) but also indispensable for integrating data collected by different methods (see Figure 28, ‘Quantitative Codes’).

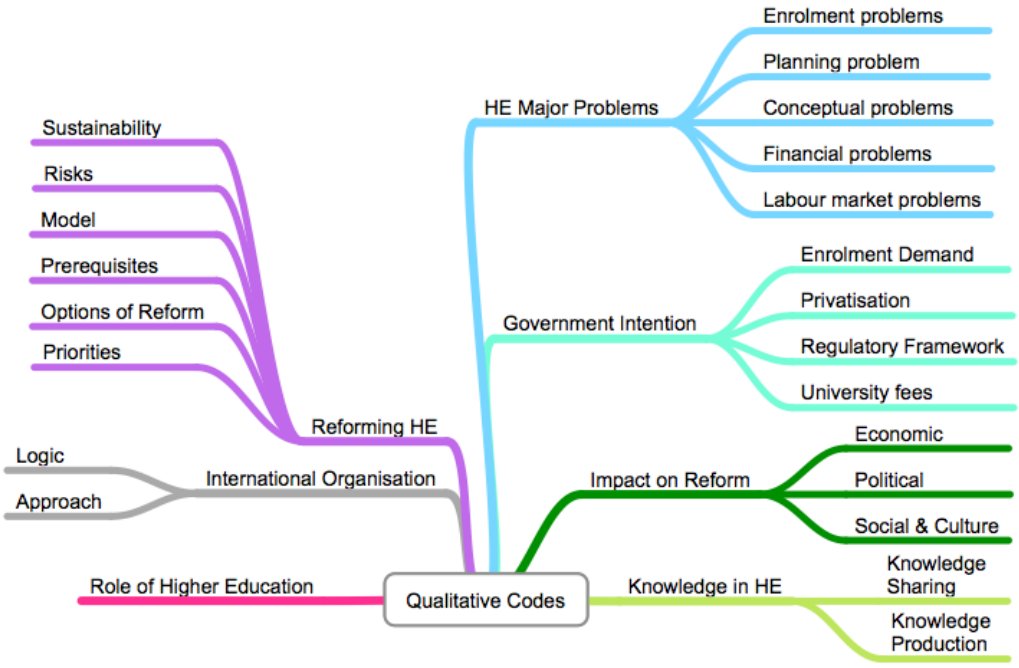

Figure 26: Qualitative Codes

It is worth mentioning that the purpose of the qualitative data is to complement the quantitative data obtained from the surveys of undergraduate and postgraduate students as well as academics. While quantitative data is mainly concerned with answering the first research question on ‘How do stakeholders perceive higher education in Egypt?’, the qualitative data is mainly concerned with answering the second and the third research questions from the perspectives of SMEs, Officials and PIFs. However, the quantitative data is also partially concerned with answering these research questions from the perspective of the stockholders.

At a later stage, the output of the quantitative data analysis was exported to the qualitative data analysis platform (MAXQDA) for further thematic analysis, in order to integrate both the quantitative data and qualitative data into one thematic structure as per Figure 27, which demonstrates the main themes for both qualitative and quantitative analysis codes. These themes are high-level themes that can capture the relevant codes from both qualitative and quantitative data analysis (see Figures 26, ‘Qualitative Codes’ and 28, ‘Quantitative Codes’).

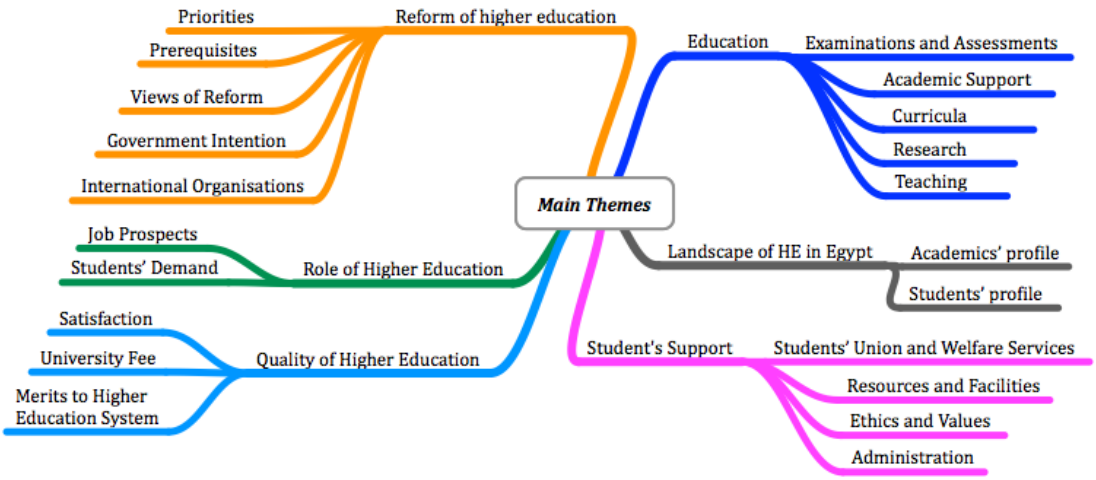

Figure 27: Findings Thematic Structure

The process of analysis was iterative and involved both deductive and inductive strategies. Although the research project was divided into five stages, analysis was conducted across the stages to compare emergent themes (Creswell & Plano Clark, 2011). Thematic analysis was identified as the appropriate method of establishing, evaluating, describing and reporting themes within qualitative data (Boyatzis, 1998 cited in Schnipper 2008). The thematic analysis has been extended across other phases (quantitative analysis output) to refine the understanding of the objectives of the higher education reform and to consolidate multiple viewpoints on the topic across issues relating to higher education and knowledge for development in Egypt rather than creating a grand narrative (see Figure 28, 'Quantitative Codes'). In addition to the cross-phases thematic analysis, the identification of unexpected themes in the data (such as ethical, favouritism and respect issues) constituted added value for the thematic analysis (Braun & Clarke, 2006 cited in Schnipper 2008).

Thematic Analysis has been applied to the collected data where codes (categories/themes) are created and associated to data which is composed in a number of forms – an interview transcript, reports, documents, statistics, and questionnaires (Andretta & Gibson, 2006).

The thematic analysis incorporated both inductive and theoretical approaches: Inductive analysis is a 'bottom-up' or data driven approach, which involves a rich thematic description of a complete data set. Themes identified through this

analysis are strongly linked to the data, and are largely independent of the researcher's preconceptions and theories (Braun & Clarke, 2006; Boyatzis, 1998). Theoretical analysis on the other hand is a 'top-down' or theory driven approach. Its starting point is a particular idea which the researcher derives either from the literature review or previous research, and which then, driven by the researcher's theories, leads to a thorough analysis of a specific aspect or theme within the data (Braun & Clarke, 2006; Boyatzis, 1998). Both thematic analysis approaches include a description and interpretations of the themes' data.

In the context of thematic analysis, 'coding' refers to the establishing of categories in relation to data; the grouping together of different instances of any individual datum under a classification term that can enable the instances to be regarded as 'of the same type' (Andretta & Gibson, 2006).

Prior to the data analysis, a set of codes (categories/themes) was established in order to identify patterns significant to the research. The codes were initially developed from the research objectives that had been derived from the research questions (see Figure 15, 'Mapping Research Stages to Research Objectives'). However, the sub-codes were adjusted after reviewing the content from the questionnaires (open questions) and interviews to ensure the alignment of data from different sources.

The interview transcripts were translated (when applicable), read thoroughly and reviewed to understand and identify the responses of the interviewees. Notes had been attached to each transcription to highlight the main ideas and views for each interviewee that included citations referring back to the relevant quotations. These notes were categorised according to the questions. After the transcriptions were individually analysed, the data then was compared based on the type of the interviewee (i.e. officials, subject matter experts, prominent intellectual figures). Key similarities and differences were identified to determine any significant findings in the reform of higher education in Egypt.

The qualitative data analysis platform (MAXQDA) was utilised to import all relevant texts (e.g. reports, interviews and open-ended questionnaire questions) into its document system and to then group these documents into temporary document sets, and view individual documents in order to edit them, mark them,

assign codes or create memos. For the purpose of integrating the qualitative data analysis and quantitative data analysis, the analysed quantitative data have been imported at a later stage to the MAXQDA (see Figure 30, 'Retrieving Coded Segments Across Qualitative and Quantitative Data') and codes have been assigned to the imported analysed quantitative data (see Figure 28, 'Quantitative Codes').

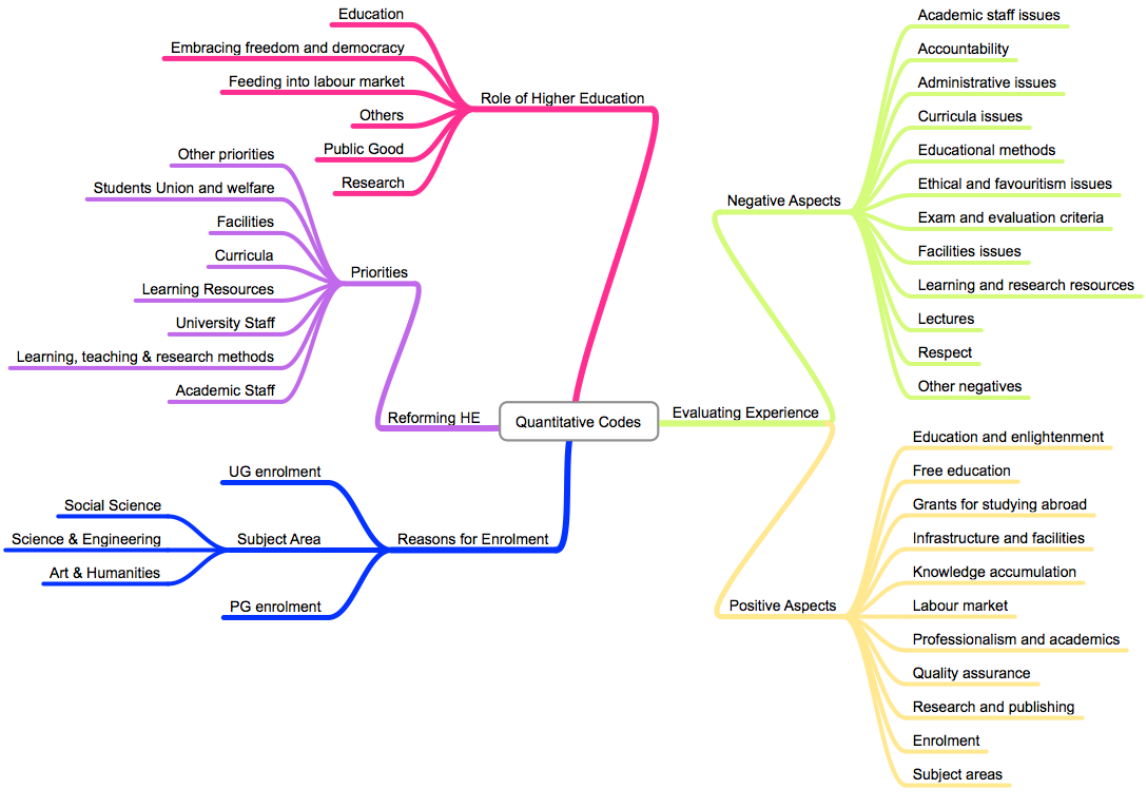

Figure 28: Quantitative Codes

The timeline below demonstrates the stages of the data analysis over a period of time and the overlap across these stages. Both the quantitative and qualitative data analyses were to a great extent conducted in parallel. The quantitative data analysis included the PG, UG and academics questionnaires, excluding the open questions, which have been analysed within the qualitative data analysis. The qualitative data analysis included interviews with PIFs, SMEs and Officials, open questions (questionnaires) and documents review. Furthermore, the output of the quantitative data analysis was subject of further thematic analysis to incorporate both the qualitative and quantitative findings into twenty overarching themes.

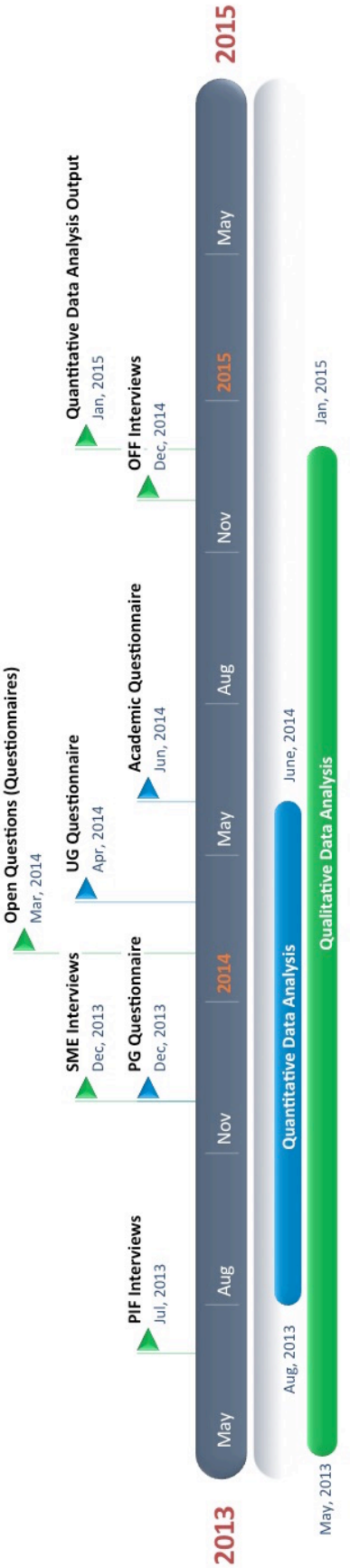

Figure 29: Data Analysis Timeline

Codes were organised into a hierarchical structure and were assigned to selected segments of text. These codes represent contextual categories, which at a later stage are used as tools for the systematic analysis of the data. Codes were given colour attributes, so the codes can refer to contextual, methodical or other aspects within the texts. The weight score feature has been utilised to indicate how important particular segments of texts are.

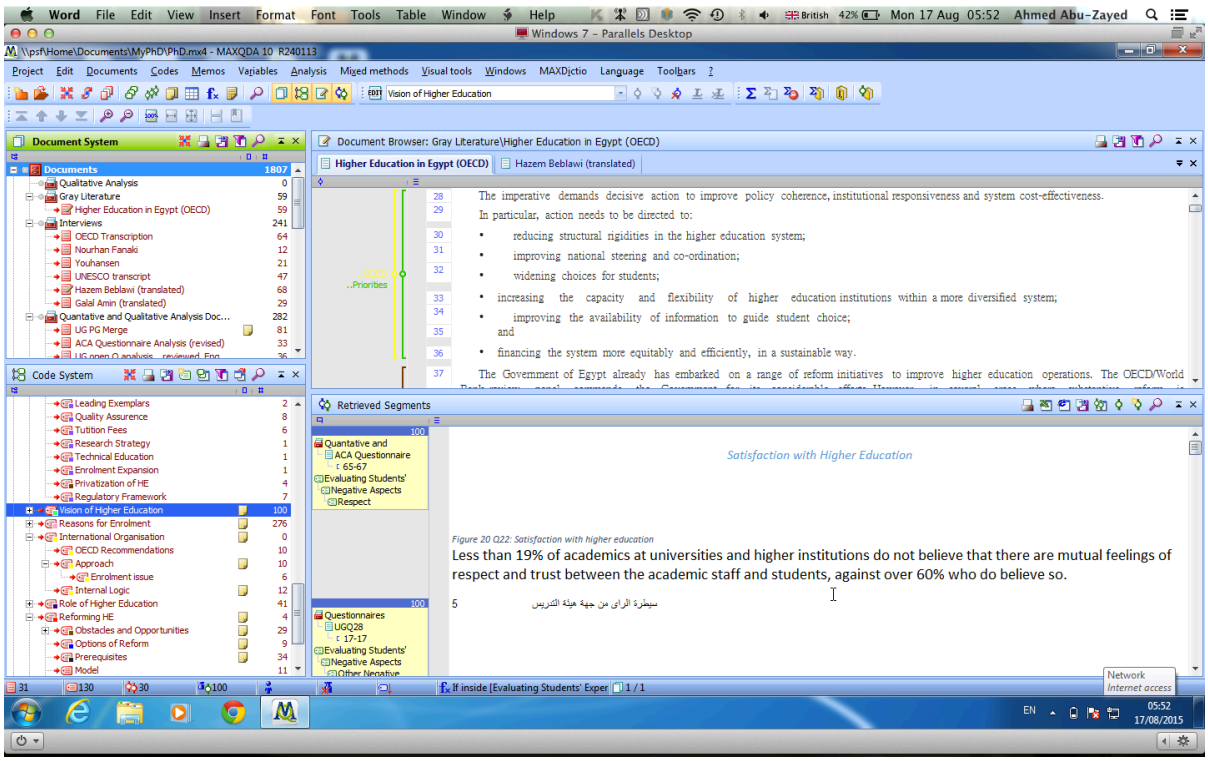

Figure 30: Retrieving Coded Segments Across Qualitative and Quantitative Data

Having coded all relevant segments and assigned weight scores, these are then collected through the retrieval system, in accordance with the codes activated. The retrieval process produces sets of segments across all the documents (i.e. interview transcriptions, open-end questions, OECD report and quantitative analysis output), taking into account the weight scores assigned, thus enabling a relatively quick and systematic analysis of data. Also, connections between codes in all documents have been identified through a visualization feature of the intersections of codes across documents (see Figure 31, 'Code Relation Matrix').

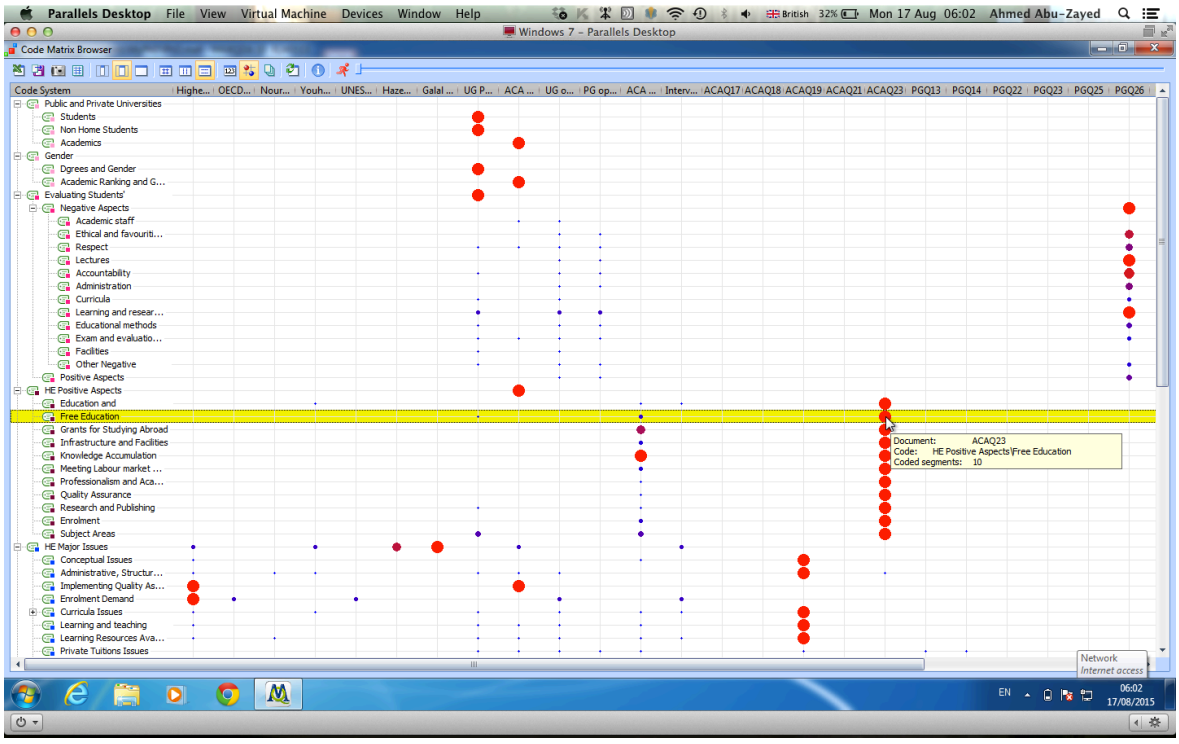

Figure 31: Code Relation Matrix

Computer Assisted Qualitative Data Analysis software (CAQDAS) such as 'Atlas.ti', 'MAXQDA' and 'NVivo' has been selected among many platforms that are designed to facilitate thematic coding according to detailed reviews provided by the CAQDAS Networking Project (CAQDAS, 2011). The advantages of using CAQDAS software include being freed from manual, systematic and clerical tasks, that are extremely time consuming, managing huge amounts of qualitative data, having increased flexibility, and having improved validity and auditability of qualitative research (St John & Johnson, 2000).

St John & Johnson (2000) raised concerns that include: increasingly deterministic and rigid processes, privileging of coding, and retrieval methods; reification of data, increased pressure on researchers to focus on volume and breadth rather than on depth and meaning, time and energy spent learning to use computer packages, increased commercialism, and distraction from the real work of analysis.

Unlike most other CAQDAS, MAXQDA was not developed on the background of Grounded Theory. Instead the software is designed for both qualitative, quantitative research and mixed methods research. The emphasis on going beyond qualitative research can be observed in the extensive attributes function

and the ability of the programme to deal relatively quickly with larger numbers of interviews (Lewins & Silver, 2007).

Use has also been made of the Knowledge Assessment Methodology that has been developed by the World Bank. The KAM provides a preliminary knowledge economy assessment of a country, which can form the basis for more detailed knowledge economy work. The Egypt scorecard has helped identify the problems and opportunities that Egypt faces in making the transition to the knowledge economy, and where it may need to focus policy attention or future investment. The OECD/World Bank review has been examined against the scorecards.

4.7. Triangulation

Triangulation is a technique for establishing credibility and validity in research and certainty in data collection. Guion (2002) pointed out five types of triangulation: data triangulation, investigator triangulation, theory triangulation, methodological triangulation and environmental triangulation. For the purpose of this study, focus will be maintained on both data triangulation and methodological triangulation.

In seeking to attain a comprehensive understanding of the context and the issues that influence the reform of higher education in Egypt, an exploratory study was designed using mixed methods with an aim of utilising the strength of each method to overcome the deficiency of the other, as well as increasing the credibility and validity of the findings through examining the same issues using different methods and sources of information (see Figure 30, 'Retrieving Coded Segments Across Qualitative and Quantitative Data').

The credibility (see Section 4.8.1) and confirmability (see Section 4.8.4) are established when different methods and sources of information are sharing similar views (e.g. the role of higher education, reform priorities).

Revising the questions in both questionnaires and interviews by several academics within the piloting phase added an element of triangulation (investigator triangulation) that reduced the potential bias in the questions.

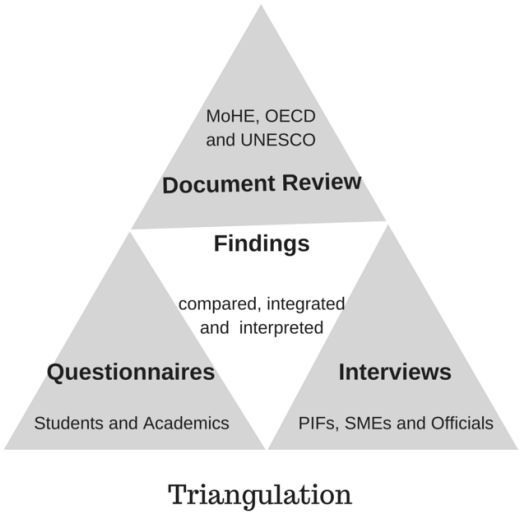

Figure 32: Data and Methodological Triangulation

4.8. Research Quality

Guba (1981) among many constructivists distanced themselves from positivists and used a different set of terminology to describe the trustworthiness of qualitative research. He constructed four criteria to reflect the quality of research, namely: creditability, transferability, dependability and confirmability, which correspond, respectively, to the positivism paradigm to internal validity, external validity, reliability and objectivity.

4.8.1. Creditability

Internal validity is one of the key criteria addressed by positivists to ensure that they measure what is actually intended. By the same token, constructivists address the credibility of their research that deals with the question, “How congruent are the findings with reality?” (Merriam, 1998, p.8)

To ensure credibility and consistency of the study, the following provisions have been made:

- Certain tactics have been used to ensure honesty in participants when contributing data (e.g. each person who is approached has been be given the opportunity to refuse to participate or to withdraw at any time from the study, participants have been encouraged to be frank, iterative questioning).

- Both data triangulation and methodological triangulation have been utilized through interviewing and document review as well as questionnaires (see Section 4.7, ‘Triangulation’).

- The questions in both questionnaires and interviews have been revised by several academics within the piloting phase.

- The research project has been evaluated as it develops and previous research findings have been examined to assess the degree to which the research's results are congruent with past studies.

- Every effort has been made to ensure the accuracy of transcriptions. Dedicated software (F5 Version 2.2) for transcription has been used for transcribing all the interviews, which allows for an easy and quick text reference to the associated audio segment.

- Detailed description has been provided for promoting credibility, as it helps to convey the actual situations that have been investigated and, to a certain extent, the contexts that surround them. Thematic analysis has been utilised for evaluating, describing and reporting themes across research stages to refine the understanding of the objectives of the higher education reform and to consolidate multiple viewpoints on higher education reform in Egypt.

4.8.2. Transferability

Within the positivism paradigm framework, external validity is fundamental for demonstrating that search results are generalisable. On the other hand, the findings of a qualitative research are specific to a limited number of participants in a particular context; hence it is not feasible to demonstrate that the results are transferable (Schoen, 2011). However, integrating quantitative and qualitative data sets in mixed methods strategies enhances generalisability, transferability, and practical significance. (Onwuegbuzie & Leech, 2004 cited in De Lisle, 2011).

The transformative paradigm framework of this study is based on the assumption that reality is multiple, context bound and constantly changing. Thus, qualitative methods (i.e. interviews and document review) within the context of the Egyptian case are utilised not to generalise, but rather to gain deeper insights of higher education reforms within cultural and social context as well as history, politics and economics in one country.

"*A (qualitative) case study design is employed to gain an in-depth*

understanding of the situation and meaning for those involved. The interest is in process rather than in outcome, in context rather than specific variable, in discovery rather than confirmation. Insights gleaned from case studies can directly influence policy, practice, and future research" (Meriam, 1998, p.19).

4.8.3. Dependability

The issue of reliability within the positivism framework assumes that if the work were repeated in the same context, with the same methods and with the same participants, similar results would be obtained (Shenton, 2004). This should be feasible within a positivism framework, since the achieved results lead to a single reality. However, in a transformative paradigm framework, the results lead to multiple socially constructed realities, which would make the reproduction of similar multiple realities problematic. Yet Lincoln (1995) and Guba (1981) pointed out a considerable overlap between credibility and dependability in practice.

In order to address the dependability issue and enable readers a detailed understanding of the methods and their effectiveness, Shenton (2004) pointed out three aspects that need to be reflected on, which include the research design and its implementation, the operational detail of data gathering and the effectiveness of the process of inquiry undertaken.

The research design is constructed according to the research objectives using mixed methods to bring together different methodological approaches in conceptualising the research problem on both ontological and epistemological aspects. It is worth noting that the mixed methods of this research are qualitatively-driven which allows for the complexity of the reform of higher education in Egypt to be captured, along with the perception of higher education reform at multiple levels.

The qualitative data covered views and perceptions of the stakeholders (i.e. officials, subject matter experts and prominent intellectual figures) on issues related to the reform of higher education in Egypt. These were then complemented by quantitative data obtained from a survey of undergraduate and postgraduate students as well as academics. The surveys, which were primarily made up of rating scales, also provided qualitative data in the form of

open-ended questions.

A combination of two parallel procedures (i.e. self-administered questionnaires and semi-structured interviews) was used to collect the data (see Section 4.5, 'Data Collection') over five research stages:

1- Students' questionnaire (PG and UG students)

2- Academics' questionnaire

3- PIFs' interviews

4- SMEs' interviews

5- Officials' interviews

Each research stage is concerned with certain research objectives (see Figure 15, 'Mapping Research Stages to Research Objectives'), which include:

- Stakeholder perceptions of the status of higher education (stage 1 and 2).
- The conceptions of the role of higher education in Egypt and how these are being challenged (stage 1, 2 and 4).
- Higher education reform components that reflect the priorities for public good and private good (stage 3, 4 and 5).
- The internal logic of World Bank and OECD in introducing certain reform models for less-developed countries (stage 5).
- The perspectives of stakeholders, subject matter experts and prominent intellectual figures on the reform of higher education in Egypt (stage 1, 2, 3 and 4).

The analysis of data was conducted in two parallel phases to accommodate both quantitative data and qualitative data. A dedicated specialised platform (MAX Qualitative Data Analysis) was used to analyse qualitative data that had been collected from interviews, open-ended questionnaire questions and key documents of the MoHE and international organisations.

4.8.4. Confirmability

The concept of confirmability is the constructivism's version of objectivity in

positivism, which ensures that the findings represent the experiences and thoughts of the participants, rather than the preferences of the researcher (Shenton, 2004). Once again, the triangulation had an essential role in promoting confirmability, since interview transcripts (i.e. PIFs, SMEs and Officials), open-ended questionnaire questions (i.e. UG, PG and Academics) and the key documents (e.g. OECD report) have been encoded into the MAX-QDA platform (for qualitative data analysis) to identify similarities, differences and relations between segments of the encoded information from different sources. The emerging themes and codes were essential to integrate data collected by different methods and to highlight the confirmability of the collected data.

4.9. Ethical Considerations

"*Ethics is generally a set of rules, principles and conventions that outline socially acceptable behaviours and social members' actions*" (Anderson, 1990, p.17 cited in Mongkhonvanit, 2008). However, "(*i)n the context of research, ethics focuses on providing guidelines for researchers, reviewing and evaluating research, and establishing enforcement mechanisms to ensure ethical research*" (Aguinis & Henle, 2002, p.35).

On the basis of adherence to best practice of pertinent professional bodies, ethical issues have been observed at every stage of this research according to the Social Research Association Ethical guidelines (SRA, 2003) and the British Educational Research Association (BERA, 2011) to minimize potential harm to participants while maintaining the quality of this research.

Additionally, the University of Exeter expects its members to abide by the seven principles identified by the Committee on Standards in Public Life that includes selflessness, integrity, objectivity, accountability, openness, honesty and leadership (The 7 Principles, 1995) as well as the guidance to universities that has been provided by the Committee of University Chairmen in its Guide for Members of Higher Education Governing Bodies in the UK (HEFCE, 2009).

The University requires research to meet legal requirements, and for researchers to comply with the requirements of the University's Ethical Policy and Procedures issued by the University's Research Committee, whereby

researchers should ensure the confidentiality of personal information relating to the participants in research. Within the framework of the University of Exeter's dedication to a responsible furthering of knowledge, researchers are expected to protect the safety, rights, dignity, confidentiality and anonymity of research subjects, unless an applicable protocol is in place.

Statutory controls and codes of practice were observed at all times. This included compliance with Data Protection Acts 1984 and 1998, and respect for privacy and confidentiality as well as freedom of information issues under the Freedom of Information Act (2000) (University of Exeter, 2011). Furthermore, relevant Intellectual Property legislation were considered and respected. All forms of academic misconduct including plagiarism, inappropriate authorship or lack of authorial recognition have been avoided (University of Exeter, n.d.).

McNamara (1994) identified five ethical concerns to be considered when conducting social research. These guidelines are concerned with the issues of informed consent, voluntary participation, respect for privacy, safeguarding anonymity and confidentiality, and accuracy of report and result. Each guideline has been observed in this research through the following:

- Stating the aim of the research as a fulfilment of a requirement for a PhD degree in Education at University of Exeter.
- Informing the participants about any potential risk that may result of their involvement in this research.
- Informing the participants of their right to anonymity and their right to withdraw from the research at any time, however any data gathered up to that point might be used.
- Assuring the participants that the ethical guidelines are observed according to the Social Research Association Ethical guidelines (SRA, 2003) and the British Educational Research Association (BERA, 2011).
- Affirming that any findings will be presented accurately and without disclosing the identity of the participants.

Bogdan and Biklen (2007) note that there is a difference between observing participants in a public place and asking participants to give an interview. They highlight the importance of informing participants of what is expected of them

and what they can expect of you. They further advise researchers to respect their informants, honour their privacy and protect their identity so as not to either embarrass them or harm them in any way. They further stress the need to make informants aware of the full process in which they will be involved, and to make the terms of the agreement clear, and finally of the need for researchers to abide by the truth when they report their findings (Bogdan & Biklen, 2007).

An introductory section was integrated into the first page of the questionnaires (see appendices 9.11.1, 9.11.2 and 9.11.3) to explain that the result of this research would be used in a thesis to fulfil a requirement for a PhD degree in Education at University of Exeter. In a message (accompanying the link to the questionnaire) on the social media, the researcher clarified that research results might be considered by policy makers in Egypt or other related parties in order to reform higher education in Egypt, and that this could be an opportunity for change. It seemed to me that it might not have been appropriate to include this message in the introductory section. Unfortunately, there was no opportunity to send a similar message with the link to the questionnaires on the universities' official web sites.

4.9.1. Consent forms and approvals

Similar procedures have been followed in the interviews. Details and purposes of the research were explained to the interviewees to ensure a full understanding of the process and their rights before commencing an interview. Consent forms were sent in order to be signed by the interviewees (see appendices 9.10.1, 9.10.2 and 9.10.3).

Ethical approval to conduct this research was obtained from Exeter University (see Appendix 9.12). The research, however, could not obtain a written permission from MoHE in Egypt to conduct this research. A verbal permission has been granted by the senior management and gave direction to include links to my questionnaires on the university websites. It seemed to the researcher that there are no clear procedures for obtaining such permission.

4.9.2. Anonymity and confidentiality

The issue of anonymity and confidentiality was also explained to participants on the first page of the questionnaire. The fact that participation in the

questionnaire is voluntary was deemed to be self-explanatory as they were published on the university websites and social media groups without targeting specific individuals, and participation was therefore clearly optional. If the voluntary nature of the questionnaire had been highlighted in the introductory section of the questionnaire it may have caused unnecessary confusion and suspicion.

Undergraduate and postgraduate students as well as academics were reached through links on the websites of the Egyptian universities, in coordination with the ICT Project (MoHE). There was no official procedure to get permission for posting the links to the questionnaires. However, an email request was sent to the senior management who approved it. Online research methodologies may be regarded as legally relatively low-risk, from web surveys and questionnaires, where issues of individual privacy and security of data often arise, to the use of increasingly sophisticated technologies (Charlesworth, 2011).

Similar procedures were followed in the interviews by the researcher, since the issue of anonymity and confidentiality was explained prior to the interviews in the consent form as well as verbally. The interview participants were provided with consent forms that set out the aims and methods of this research project, the voluntary nature of participation, the confidential and anonymous nature of any data collected and the security of storage of this data.

It is worth mentioning that this study will not permit any way of identification for the participants in the interviews. A coding convention has been used for the participants in the interviews. During this research project, all password protected data files (text and audio) are stored and encrypted on a personal computer and personal storage device. At the end of the research project, all data will be permanently destroyed.

4.9.3. Disclosure and feedback

In the interviews with key position holders at the MoHE in Egypt, a considerable number of them were willing to give information off the record, but refused to give consent for the interviews to be recorded, despite the assurance of anonymity and confidentiality of these interviews. This appears to be due to the sensitivity arising from the current political climate in Egypt, where any criticism

of government policies and plans is suspected to be part of an internal or external political agenda to divide the country and undermine the regime. Also, it is possible that there is no information disclosure policy in place. Both MoHE Officials interviewees and international organisation SME interviewees were nominated by their senior management after writing to them, whereas PIF interviewees were nominated by the researcher according to a certain set of criteria based on his knowledge and full awareness of the Egyptian society as explained in section 4.5.4 (Stage 4, PIFs' Interviews).

CHAPTER 5

5. QUALITATIVE AND QUANTITATIVE FINDINGS AND ANALYSES

5.1. Introduction

As discussed earlier, collecting data using both quantitative and qualitative approaches was essential to attain a deep understanding of a wide spectrum of issues that influence the reform of higher education in Egypt. The analysis of data was conducted in two parallel phases to accommodate both quantitative data and qualitative data. However, a cross-phases analysis was essential to consolidate both the qualitative and quantitative findings and analyses in this chapter, whereby the output of the quantitative data analysis was subject of further thematic analyses (see Figure 28, 'Quantitative Codes') to incorporate both the qualitative and quantitative thematic codes into one thematic structure. Hence, the findings and analyses are normalised into twenty-one overarching themes (see Figure 27, 'Findings Thematic Structure') over six sections that correspond to the research questions:

- How do students and academics perceive higher education in Egypt? This is answered in section 5.3 ('Education'), section 5.4 ('Student Support') and section 5.5 ('Quality of Higher Education').
- What are the views of academics and prominent intellectual figures on the role of higher education in Egypt? This is answered in section 5.6 ('Role of Higher Education').
- What are the perspectives on the prerequisites and priorities of higher education reform in Egypt? This is answered in section 5.7 ('Reform of Higher Education').

The themes have been identified within the conceptual framework reconciling state, society and market to form the parameters of a tailor-made reform model (see Section 3.9, 'Conceptual Framework'). These parameters move along a continuum from a state-centric model to a neo-liberal model across the state, society and market dimensions (see Figure 10, 'Conceptual Framework of Reforming Higher Education').

Within the conceptual framework, the state's position on higher education between provision and regulating higher education is guided by an understanding of the landscape of higher education in Egypt, including the geographical distribution of universities, students' profile (see Appendix 9.13.1) and academics' profile (see Appendix 9.13.2), along with the current status of higher education in Egypt. This should demonstrate the capabilities of the state in terms of resources, planning and regulating higher education.

Meanwhile, society's position on higher education is guided by the perceptions of stakeholders as well as the prominent intellectual figures. These perceptions have been reflected in the vision and the priorities of the reform as well as the role of higher education. Furthermore, the market dimension of the conceptual framework has been guided by the relevance of higher education to the job market and the commoditisation of higher education, including its impact on higher education as human right, which is responding to the state's commitment to the inclusiveness of higher education.

On a different note, in order to clearly present the participants' perspectives and synthesize the findings across different groups, descriptive statistics (population mean, standard deviation, confidence intervals of the mean) have been utilised in statistical tables along with inferential statistics for identifying similarities and differences between different groups (UG students, PG students and Academics) and to estimate the population means.

As described in the 'Quantitative Data Analysis' section (4.6.1), the descriptive statistical tables provided below are based on a range of values from 1 to 5 that represents the answer choices 'Strongly agree', 'Agree', 'Neither agree nor disagree', 'Disagree' and 'Strongly disagree' respectively. For reference purpose, frequency tables, including the percentage for the groups (UG, PG and Academics) have been arranged by question in Appendix9.5, 9.6 and 9.7 respectively.

In order to validate the results of the U test and H test, certain assumptions have been met. The tested variables are ordinal and independent for the independent groups (i.e. UG, PG and Academics). Observations are independent in each group and among the groups (i.e. different participants). It

has also been assumed that the group-distributions under the null hypothesis are the same. The alternative hypothesis is that at least one of the groups has a different distribution shape from at least one of the other groups. This means that the group with the different distribution shape has at least a different mean rank (when all groups have the same median), otherwise both the median and the mean rank of this group are different from at least one other group. When a statistically significant difference is detected (H test), a multiple pairwise comparisons test (Chi-square) is conducted to identify the differences among the groups. The significance values have been adjusted by Bonferroni correction for multiple tests.

Statistically identifying the significant differences and similarities between UG students, PG students and Academics would help to fully answer the research question on how higher education in Egypt is perceived by students and academics and to what extent they share the same views. Also, it answers the other two questions in conjunction with qualitative findings and analysis on the role of higher education and the prerequisites and priorities of higher education reform in Egypt.

5.2. Landscape of Higher Education in Egypt

Understanding the landscape of higher education in Egypt, including the geographical distribution of universities, was crucial for contextualising the current status of higher education in Egypt. A summary of the students' profile and academics' profile (see Table 16 and Table 17) provides an overview of the landscape of higher education. The full findings and analysis are provided in Appendix 9.13.1 and Appendix 9.13.2, respectively.

5.2.1. Students' profile

The participation of students from private universities was modest in most governorates compared to the participation of students from public universities in the same governorates. Some governorates completely lack private universities, while other governorates lack both private and public universities. Participation from the less developed governorates, primarily in Southern Egypt, is modest compared to Northern Egypt and Greater Cairo.

The high proportion of non-home students at private universities reflects a great demand on private higher education, mainly concentrated in the greater Cairo, and an obvious shortage of private universities in more than 18 out of 27 governorates. In both UG and PG surveys, the number of non-home male students was about twice that of female students. This is likely to reflect social restrictions on female students living away from their family.

The geographical distribution of non-home students reflects a shortage of higher education provision in certain geographical areas either at undergraduate level or postgraduate level and suggests a degree of inequality, especially for female students. It is worth mentioning that some governorates lacked any kind of female participation whatsoever; namely, the governorates of Luxor, Red Sea, Buhayrah, New Valley, Southern Sinai, and Matruh. Participation in Damietta, meanwhile, came only from female students (see Appendix 9.13.1.5).

Table 16: Students' Profile

Students' Profile	UG Students	PG Students
Total Valid Responses	577	233
Male - Female	55.63% - 44.37%	56.22% - 43.78%
Public - Private Universities	95.84% - 4.16%	96.57% - 3.43%
Non-Home Students	19.89%	21.40%
Bachelor - Licentiate	78.68% - 21.32%	-
Diploma - Masters - PhD	-	28.33% - 48.93% - 22.75%
+70% of Responses are from (respectively)	Sharqiyah, Alexandria, Kafr Alshaykh and Cairo	Cairo, Sharqiyah, Kafr Alshaykh, Gharbiyah and Alexandria

5.2.1. Academics' profile

The participation of academics from private universities was very modest in most governorates compared with that of academics from public universities and higher institutions in the same governorates. Over 10% of the academics teach at more than one university. However, more than 95% of those who teach at more than one university are attached to public universities. It is worth

mentioning that about 26% of them also teach at universities outside Egypt, such as Saudi Arabia (see Appendix 9.13.2).

Table 17: Academics' Profile

Academics' Profile	
Total Valid Responses	223
Male - Female	67.26% - 32.74%
Public - Private Universities	96.86% - 3.14%
Teaching at Other Universities	10.50%
Lecturer, Asst. Lecturer, Professor, Teaching Asst. and Asst. Professor	39.46%, 21.97%, 15.25%, 14.80% and 8.52%
+70% of Responses are from (respectively)	Sharqiyah, Cairo, Kafr Alshaykh, Alexandria and Munufiyah

5.3. Education

5.3.1. Curricula

One of the major concerns among students is the quality of the curricula provided in higher education and the relevance to the job market.

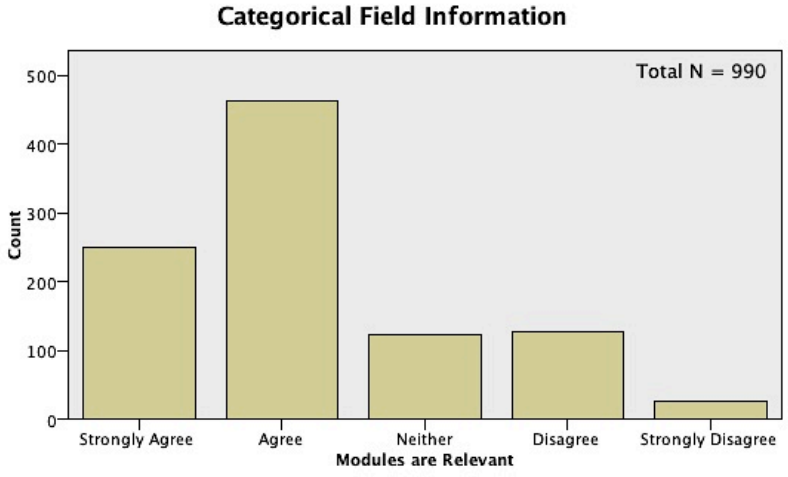

Figure 33: Modules are Relevant

The table below (Table 18) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 18: Modules are Relevant

Modules are Relevant	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q10/4)	214	2	2.11 (0.93)	[1.98, 2.24]	477.79
UG (Q11/1)	562	2	2.18 (1.02)	[2.10, 2.26]	489.40
PG (10/1)	214	2	2.38 (1.18)	[2.46, 2.54]	529.24
Participants	990	2	2.21 (1.04)	[2.14, 2.28]	

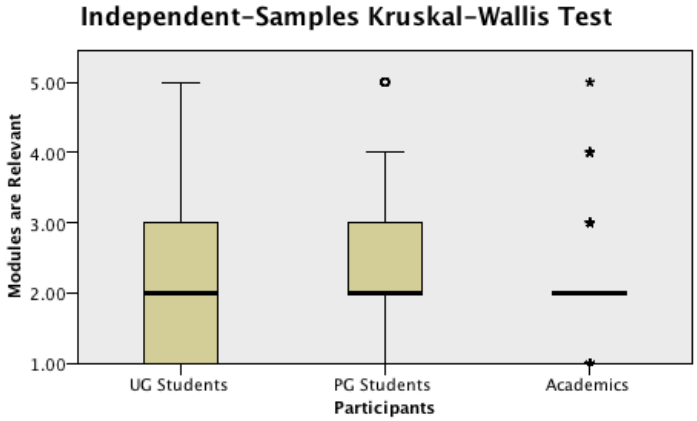

Figure 34: K-W Test (Modules are Relevant)

A Kruskal-Wallis H test revealed no significant differences between the UG, PG and Academics groups, $H(2) = 4.62, p = .099$. The total population mean is 2.21 ± 0.07.

Over 77% of the academics participating in the survey deemed the modules they teach relevant and an added value to the specialization, whereas less than 68% of PG and 72% of UG students shared the same view. It is worth mentioning that less than 29% of academics believe that education and research curricula match the needs of the job market (see Q15/1, Appendix 9.7).

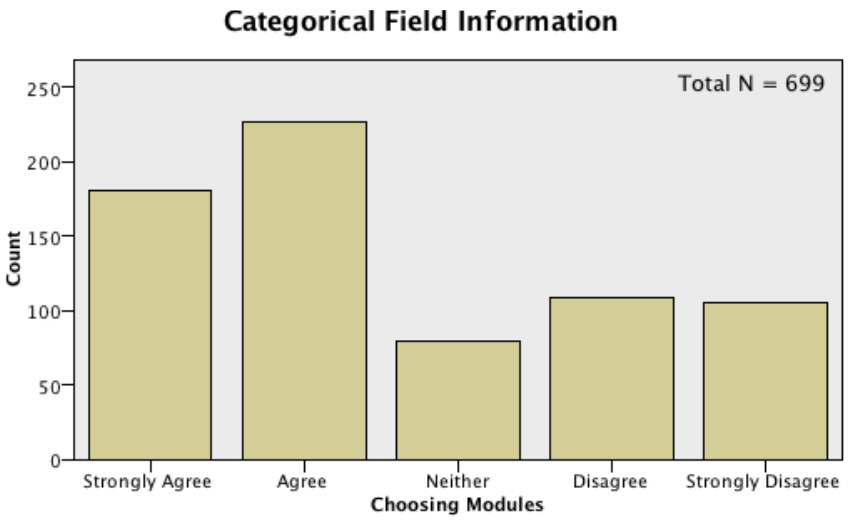

Figure 35: Choosing Modules

The table below (Table 19) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 19: Choosing Modules

Choosing Modules	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q11/2)	364	2	2.37 (1.33)	[2.23, 2.51]	315.63
PG (Q10/2)	159	2	2.41 (1.42)	[2.19, 2.63]	317.21
ACA (Q10/6)	176	3	3.32 (1.31)	[3.13, 3.51]	450.71
Participants	699	2	2.62 (1.40)	[2.52, 2.72]	

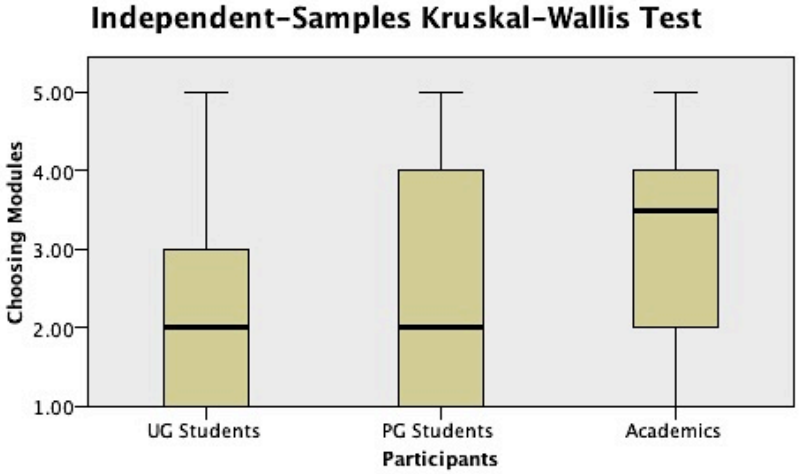

Figure 36: K-W Test (Choosing Modules)

A Kruskal-Wallis H test showed a statistically significant difference among the

academics, UG students and PG students, $H(2) = 62.22, p = .000$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant higher mean rank than PG and UG students, $X^2 = (2, N = 699) = -6.23, p = .000,\ X^2 = (2, N = 699) = -7.51, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.62 ± 0.10.

Table 20: Pairwise Comparisons of Participants (Choosing Modules)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-PG Students	-1.584	18.616	-.085	.932	1.000
UG Students-Academics	-135.087	17.979	-7.514	.000	.000
PG Students-Academics	-133.502	21.426	-6.231	.000	.000

More than 64% of undergraduate and 67% of postgraduate students indicated that they can choose the modules they want to study, comparing to less than 37% of academics who believed that there is a diverse array of elective modules available for the students. It is worth noting that over 39% and 31% of UG and PG students, respectively, do not have the option to choose among the modules.

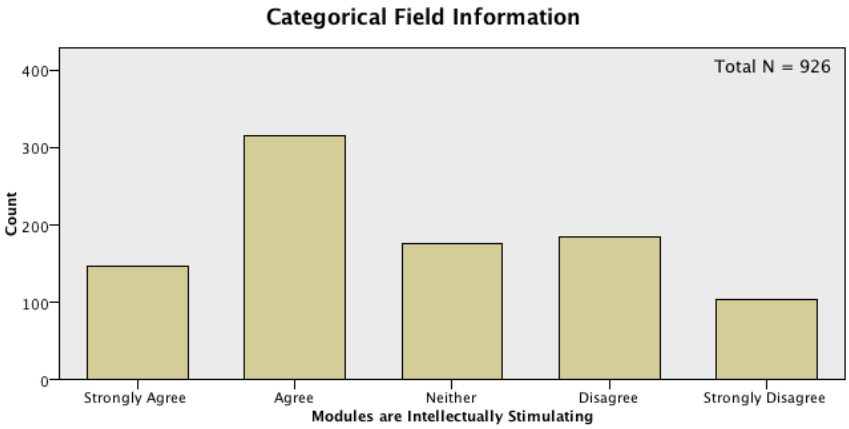

Figure 37: Modules are Intellectually Stimulating

The table below (Table 21) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 21: Modules are Intellectually Stimulating

Modules are Intellectually Stimulating	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q10/3)	211	2	2.51 (1.12)	[2.36, 2.66]	410.34
PG (Q10/3)	199	3	2.81 (1.28)	[2.63, 2.99]	473.65
UG (Q11/3)	516	3	2.85 (1.28)	[2.74, 2.96]	481.32
Participants	926	3	2.76 (1.25)	[2.68, 2.84]	

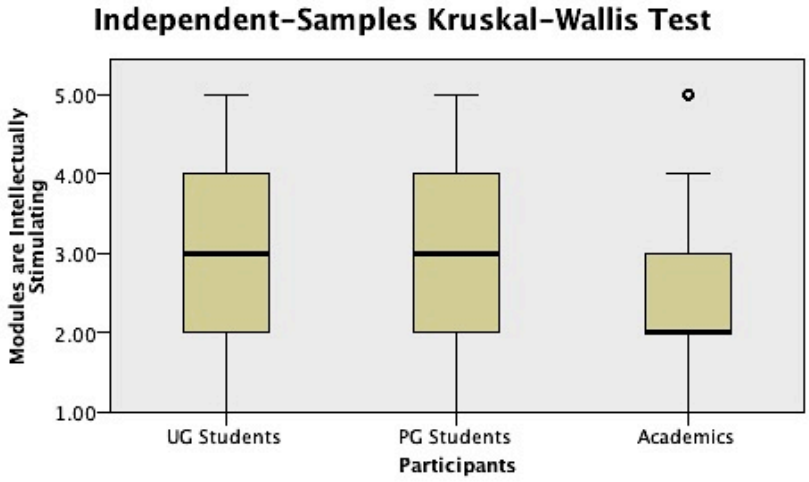

Figure 38: K-W Test (Modules are Intellectually Stimulating)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 11.60, p = .003$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than PG and UG students, $X^2 = (2, N = 926) = 2.47, p = .041$, $X^2 = (2, N = 926) = 3.35, p = .002$. However, the PG students and UG students did not differ significantly. The total population mean is 2.76 ± 0.08.

Table 22: Pairwise Comparisons of Participants (Modules are Intellectually Stimulating)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	63.302	25.629	2.470	.014	.041
Academics-UG Students	70.980	21.194	3.349	.001	.002
PG Students-UG Students	7.678	21.643	.355	.723	1.000

Less than 46% of UG students and 47% PG students deemed their modules intellectually stimulating and motivating, whereas over 63% of academics believe that the modules they teach are stimulating and inspiring.

In the undergraduate survey, when comparing between private and public university students, we find that over 86% of private university students find the modules relevant to their study, against less than 71% of public university students. Also, more than 66% of private university students found the modules intellectually stimulating and motivating, versus less than 45% of public university students (see Q11, Appendix 9.5.1). It thus appears that the curricula in the private universities are only slightly better than those of public universities, despite the fact that most private universities were recently established and are well-funded.

When comparing between Licentiate and Bachelor's degree students, we find that more than 77% of the Licentiate (humanities) students find the modules relevant to their courses, versus less than 70% of the Bachelor students (e.g. science, engineering, social science). More than 60% of the Licentiate students found the modules intellectually stimulating and motivating, versus less than 42% of the Bachelor students (see Q11, Appendix 9.5.2). It appears that the relevance of curricula is particularly high in the case of science, engineering and social sciences, subjects whose development is supported by and dependent on the rapid developments in information and communication technology.

In the postgraduate survey, a comparison between male and female students reveals that over 40% of the female students do not find the modules intellectually stimulating and motivating, against 30% of the male students (see Q10, Appendix 9.6.3). Further research may be needed to clarify the reason for

this variation.

When comparing Higher Diploma, Masters and Ph.D. students, we find that more than 78% and 72% of Ph.D. and Higher Diploma students, respectively, deem the modules relevant to their programmes, against less than 60% of the Masters' students (see Q10, Appendix 9.6.1).

The common consensus among the students was that there was a mismatch with too many theoretical subjects and not enough practical application or modern technological development. The students said they were concerned that there is a lot of focus on memorization at the expense of comprehension and practice, thus denying the students the opportunity to be creative and conduct research. Some engineering students, for example, complained about the lack of practical training, saying that their studies are purely theoretical. They stated, in addition, that there is no freedom in the choice of graduation project, which has a substantial impact on students' grades.

A number of students called for more attention to be paid to the specialization modules and practical training, so that they are not a mere matter of formality. They expressed their wish to be qualified for work immediately upon graduation. They demanded that elective lectures and subjects be made available to high academic achievers to allow them to stand out and satisfy their thirst for knowledge within a specialized framework. They also called for the removal of literary subjects from science faculties. One of the students complained that some textbooks are written in English, which require more time to translate, memorize and study.

Students mentioned the need to develop the scientific content in curricula and the lack of helping tools and resources to understand the curricula. In addition, the curricula were described as too large to be covered in the allocated time and as being ill-distributed over the academic years. Many students stressed that the curricula do not seem to prepare students for the job market. They demanded that the curricula be linked to job requirements and made more relevant for the job market. Engineering students in particular criticised the fact that their curricula were entirely theoretical and detached from the reality of work life.

Some academics pointed to the inadequacy of the curricula and the scientific content. They stressed a need to develop the curricula, to set up a clear strategy, especially for postgraduate students, and to make available not only local but international information sources. They talked about the need for varied and customized programmes to serve the community, and the need to develop the curricula and teaching methods. They complained that some curricula contained information that is not applicable, and lamented the lack of educational resources to serve each module.

Echoing opinions expressed by students, the academics further stated that the current curricula do not train the students for the job market. In addition, they felt that curricula lack specific goals and are not in keeping with the requirements of the job market and community needs.

Language

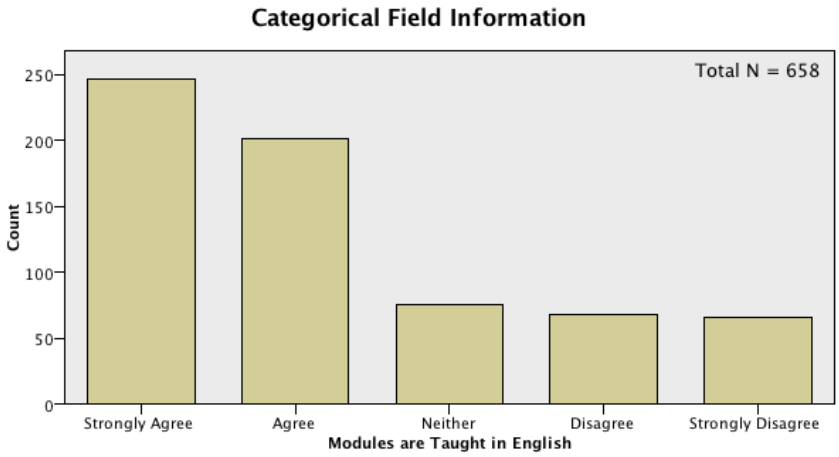

Figure 39: Modules are Taught in English

The table below (Table 23) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 23: Modules are Taught in English

Modules are Taught in English	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
UG (Q11/4)	487	2	2.18 (1.28)	[2.07, 2.29]	322.28	156949

PG (Q10/4)	171	2	2.43 (1.43)	[2.22, 2.64]	350.07	59862
Participants	658	2	2.25 (1.32)	[2.15, 2.35]		

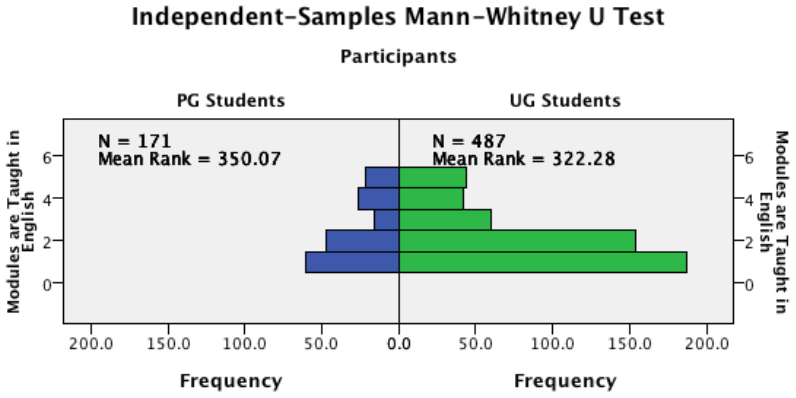

Figure 40: Mann-Whitney Test (Modules are Taught in English)

A Mann-Whitney U test revealed no statistically significant difference between PG and UG groups, $U(656) = 38121, \mathrm{z} = -1.72, p = .08$. The total population mean is 2.25 ± 0.10

Table 24: Test Statistics (Modules are Taught in English)

Mann-Whitney U	38121
Wilcoxon W	156949
Z	-1.72
Asymptotic Sig. (2-tailed)	.08

Where applicable, over 62% of PG students and 70% UG students stated that some modules are taught in English. Over 52% of the Higher Diploma students indicated that they are taught courses in English, against more than 64% of the Masters and Ph.D. students (see Q10, Appendix 9.6.1). Also, over 74% of the Bachelor students stated that some modules are taught in English versus 50% of the Licentiate students (see Q11, Appendix 9.5.2).

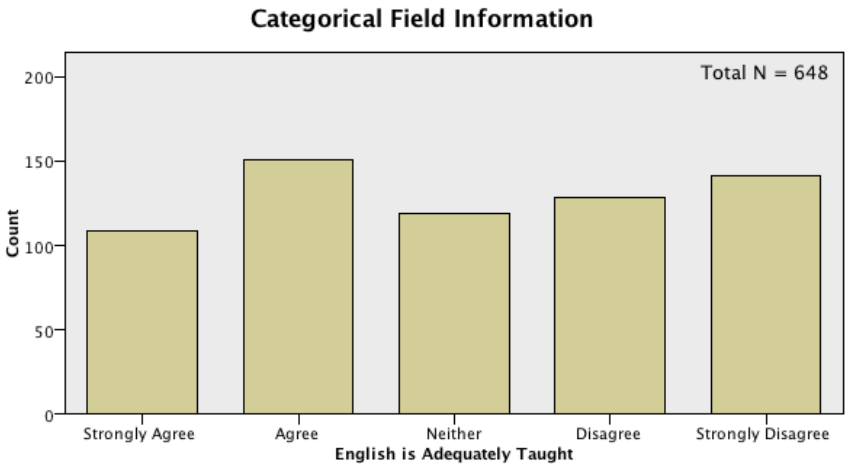

Figure 41: English is Adequately Taught

The table below (Table 25) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 25: English is Adequately Taught

English is Adequately Taught	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
UG (Q11/5)	481	3	3.01 (1.42)	[2.88, 3.14]	317.69	152809.50
PG (Q10/5)	167	3	3.22 (1.34)	[3.01, 3.43]	344.11	57466.50
Participants	648	3	3.06 (1.41)	[2.95, 3.17]		

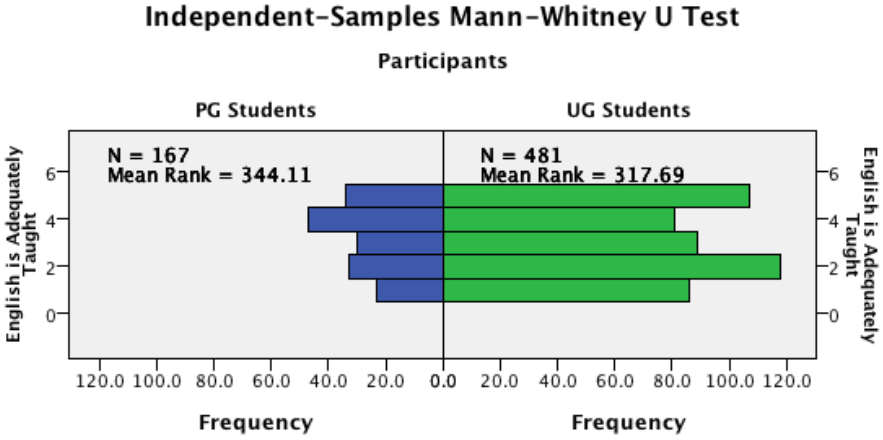

Figure 42: Mann-Whitney Test (English is Adequately Taught)

A Mann-Whitney U test revealed no statistically significant difference between

PG and UG groups, $U(646) = 36888.50, \mathrm{z} = -1.60, p = .10$. The total population mean is 3.06 ± 0.11.

Table 26: Test Statistics (English is Adequately Taught)

Mann-Whitney U	36888.50
Wilcoxon W	152809.50
Z	-1.60
Asymptotic. Sig. (2-tailed)	.10

Less than 43% of UG students expressed satisfaction with English teaching at their universities, compared to less than 34% of PG students.

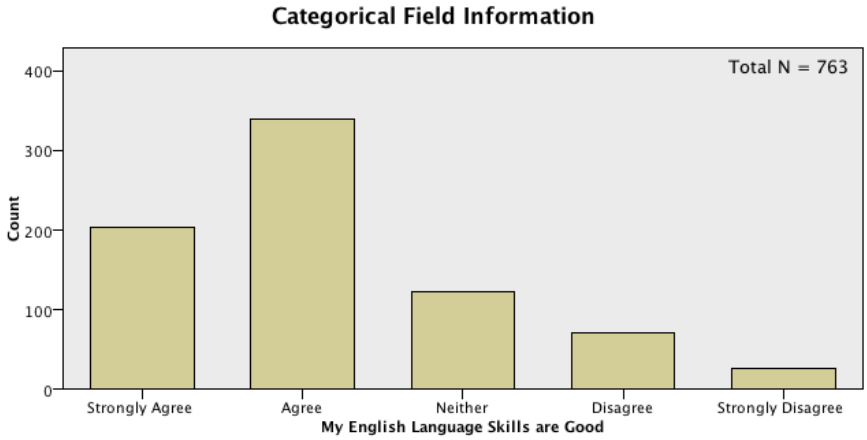

Figure 43: My English Language Skills are Good

The table below (Table 27) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 27: My English Language Skills are Good

My English Language Skills are Good	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
PG (Q15/6)	225	2	2.18 (1.05)	[2.04, 2.32]	377.84	85013
UG (Q11/6)	538	2	2.19 (1.04)	[2.10, 2.28]	383.74	206453
Participants	763	2	2.19 (1.05)	[2.12, 2.26]		

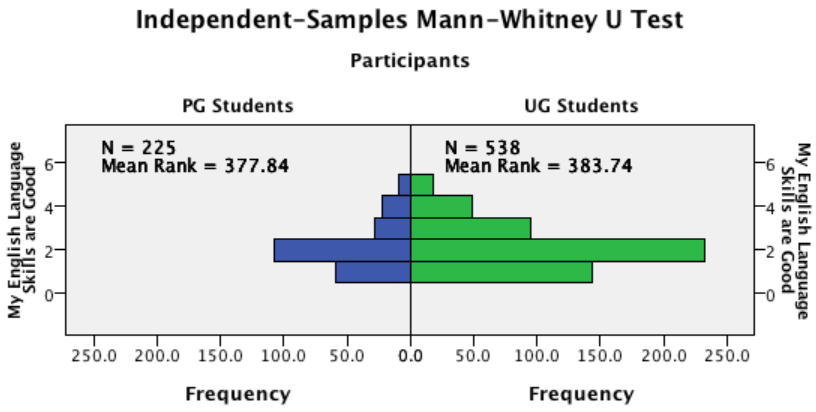

Figure 44: Mann-Whitney Test (My English Language Skills are Good)

A Mann-Whitney U test revealed no statistically significant difference between PG and UG groups, $U(646) = 59588, \mathrm{z} = .35, p = .72$. The total population mean is 2.19 ± 0.07.

Table 28: Test Statistics (My English Language Skills are Good)

Mann-Whitney U	59588
Wilcoxon W	85013
Z	-.35
Asymptotic Sig. (2-tailed)	.72

Over 73% of PG students and 69% of UG students said they had proficiency in English. It is my personal belief that there is a great deal of overestimation of the students' own language abilities, especially among public university students. It is worth noting that more than 70% of public university students have expressed satisfaction with their English proficiency versus less than 60% of private university students (see Q11, Appendix 9.5.1).

The academic respondents criticized the weak language skills of both the academic staff and students. They demanded reviving the Arabisation movement and involving the academic staff and students in it. This way, they said, the university would at least be a producer of new books and research. They added that this can be accomplished by studying foreign resources in Arabic.

OFF1 stated that Egyptian university students as well as academics are lagging behind globally in terms of their language skills.

5.3.2. Teaching

More than 48% of undergraduate students expressed satisfaction with the lecturers' ability to explain the modules, and over 35% expressed satisfaction with the lecturers' role in simplifying the modules. However, only less than 30% expressed satisfaction with the teaching methods (see Q12, Appendix 9.5).

When comparing between private and public university students, we find that more than 70% of the private university students are satisfied with the lecturers' ability in explaining the modules, versus less than 48% of public university students. Also, More than 62% of private university students expressed their satisfaction with the lecturers' role in simplifying the modules, versus less than 35% of public university students. Also, 50% of private university students expressed satisfaction with the teaching methods, versus less than 29% of the public university students (see Q12, Appendix 9.5.1).

Despite the fact that the overall findings on teaching are not encouraging, the private universities are ahead of public universities in terms of satisfaction with teaching.

Table 29: Lecturers are Proficient in Teaching

Lecturers are proficient in teaching	N	*Md*	*M* (*SD*)	95% *CI*	Population Mean
UG (Q12/1)	577	3	2.73 (1.15)	[2.64, 2.82]	2.73 ±3.45%

Table 30: Lecturers Simplified Modules

Lecturers simplified modules	N	*Md*	*M* (*SD*)	95% *CI*	Population Mean
UG (Q12/2)	577	3	3.10 (1.25)	[3.00, 3.20]	3.10 ±3.30%

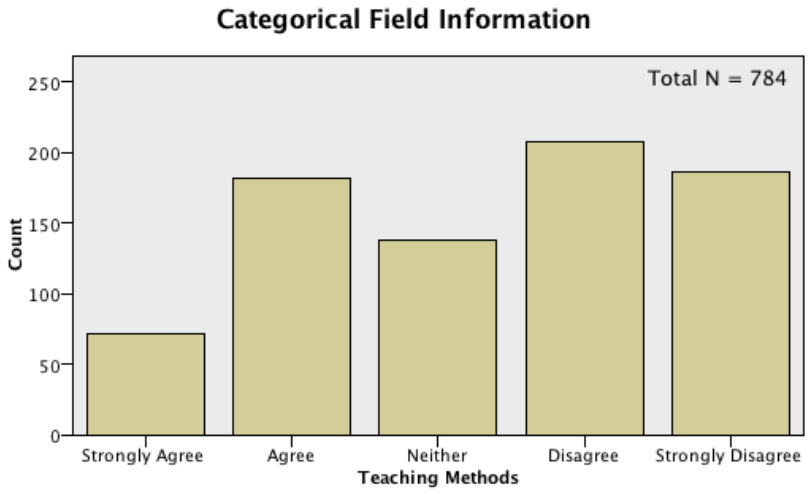

Figure 45: Teaching Methods

The table below (Table 31) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 31: Teaching Methods

Teaching Methods	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
ACA (Q10/5)	207	3	3.09 (1.18)	[2.91, 3.27]	348.47	72132.50
UG (Q12/3)	577	4	3.41 (1.34)	[3.30, 3.52]	408.30	235587.50
Participants	784	4	3.32 (1.31)	[3.23, 3.41]		

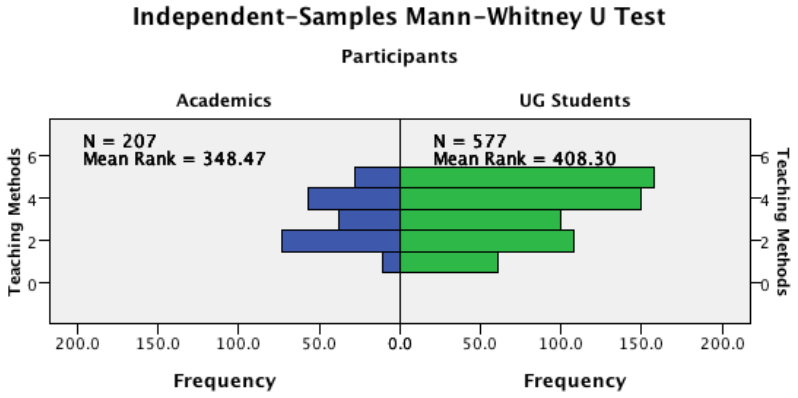

Figure 46: Mann-Whitney Test (Teaching Methods)

A Mann-Whitney U test showed a statistically significant difference between UG

students and academics groups, $U(656) = 50604.50, \mathrm{z} = -3.34, p = .001$. The total population mean is 3.32 ± 0.09.

Table 32: Statistics Tests (Teaching Methods)

Mann-Whitney U	50604.50
Wilcoxon W	72132.50
Z	-3.34
Asymptotic Sig. (2-tailed)	.001

It is worth mentioning that over 40% of academics stated that the university adopts advanced teaching methods (see Q10/5, Appendix 9.7), whereas less than 30% of UG students expressed satisfaction with the teaching methods (see Q12/3, Appendix 9.5).

When comparing Licentiate (Humanities) with Bachelor (Science, Engineering, Social Science) students, we find that more than 61% of Licentiate students think that their lecturers are proficient in explaining the modules, versus less than 46% of the Bachelor students. More than 47% of Licentiate students expressed satisfaction with the lecturers' role in simplifying the modules, versus less than 33% of Bachelor students. Over 39% of Licentiate students expressed satisfaction with the teaching methods, versus less than 27% of Bachelor students (see Q12, Appendix 9.5.2).

Students complained that they considered the pedagogical methods employed to be obsolete and pointless as focus is placed on memorization as opposed to critical and analytical thinking. They complained about the failure to manage lecture time well, and the time wasted on writing the lecture on the blackboard and in discussing issues not related to the lesson. They also complained that some lecturers failed to explain the lesson well, and they criticized the failings of practical teaching and the whole teaching system. Students bemoaned the lack of creativity in out-dated, traditional teaching methods, which do not encourage practical application, understanding or passion for study. They criticized the obsolete teaching technologies and expressed discontent at the lack of equipment and facilities, and at the underdeveloped pedagogical tools.

The students also spoke of the academic staff's need for reintegration into

higher education, constant professional development, and training courses. This would provide them with skills they lack in order to keep up with the developments of the age, such as the use of technology and modern gadgets.

Meanwhile, 62% of academics expressed satisfaction with the number of teaching hours allocated to them, against less than 26% who expressed dissatisfaction (see Q10/8, Appendix 9.7).

Academics complained about the lack of participation and interaction between the students and the teachers. They also criticized what they suggested was the detachment of theory from practice, the lack of practical training, and the reliance on traditional methods in teaching and doing scientific research. One of the respondents suggested that the most important problem is the obsolete and dry teaching method and the refusal to go down to the students' level, adding that the psychological factor is very important.

The academics also criticized what they saw as the incompetency of the academic staff in teaching and their lack of grasp over modern teaching methods suitable for their respective specializations. They further criticized the importance allocated to memorization over comprehension, even in the development of tests. Moreover, they criticized the lack of equipment and complained that the current education does not encourage critical thinking. However, one of the respondents countered that the students may not be ready for a new student-centred teaching method.

Private Tuition

The undergraduate survey revealed that over 24% of public university students use a private tutor in at least one subject, compared to less than 17% of private university students (see Q13, Appendix 9.5.1). When comparing between Bachelor and Licentiate students, we find that 26% of Bachelor students use a private tutor in at least one subject, compared to less than 18% of Licentiate students (see Q13, Appendix 9.5.2). Only less than 20% of female students use a private tutor in at least one subject, against over 27% of male students (see Q13, Appendix 9.5.3). The postgraduate survey revealed that less than 8% of postgraduate students use a private tutor in at least one subject. Over 13% of Higher Diploma students use a private tutor, against less than 4% of Masters

students and 8% of Ph.D. students (see Q11, Appendix 9.6.1).

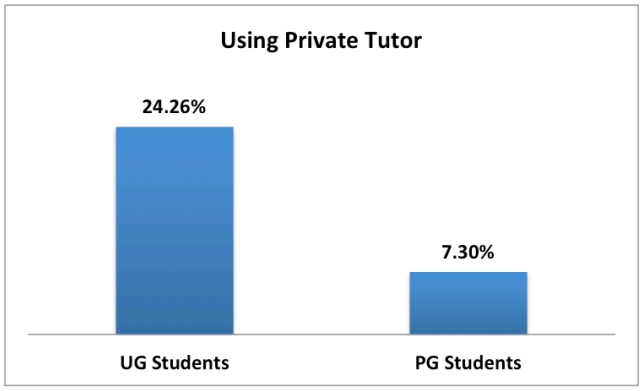

Figure 47: Using a Private Tutor

On the other hand, less than 2% of academics said that they provide private tuition, delivering an average of 14 hours a week (see Q11, Appendix 9.7).

OFF2 stated that academics are strongly pushing back against the use of the e-learning portal because making educational material available online will affect the sale of their academic books. I would add that making educational material available online would reduce the demand for private tuition. It is worth mentioning that over 40% of academics believe that academic staff are paid well and that the salaries of academics have been at least doubled since this questionnaire was carried out.

Number of subjects studied with a private tutor:

Over 52% of undergraduate students who take private lessons use a private tutor in one or two subjects; over 30% in three or four subjects; and the rest (about 17%) in five to ten subjects. Over 58% of postgraduate students who take private lessons use a private tutor in two or three subjects, and over 23% in five subjects.

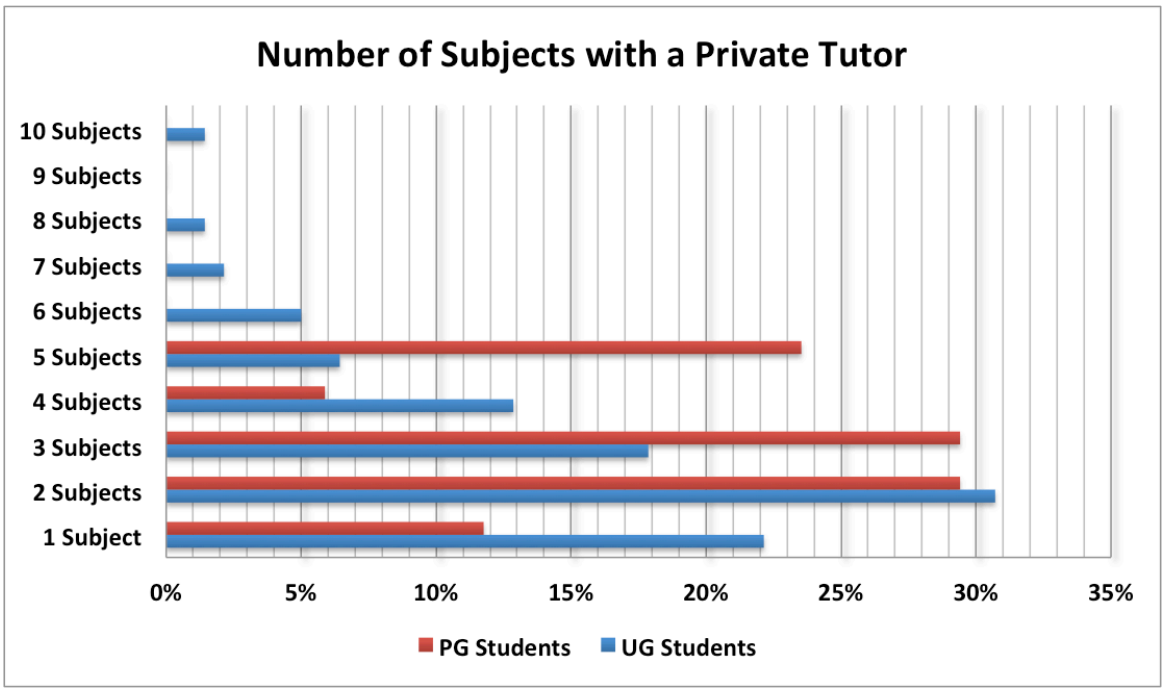

Figure 48: Number of Subjects with a Private Tutor

Reasons for using a private tutor:

The reasons cited for using a private tutor vary, but the three top reasons for both undergraduate and postgraduate students, in order, are:

- The lecturers' inability to explain the modules
- The overcrowded lecture halls
- The difficulty of the modules

The order of the reasons given by private and public undergraduate university students differed. In private universities, the difficulty of the modules came first on their list, versus the lecturers' inability to explain the modules in public universities. This reason came second in private universities, versus the overcrowded lecture halls in public universities.

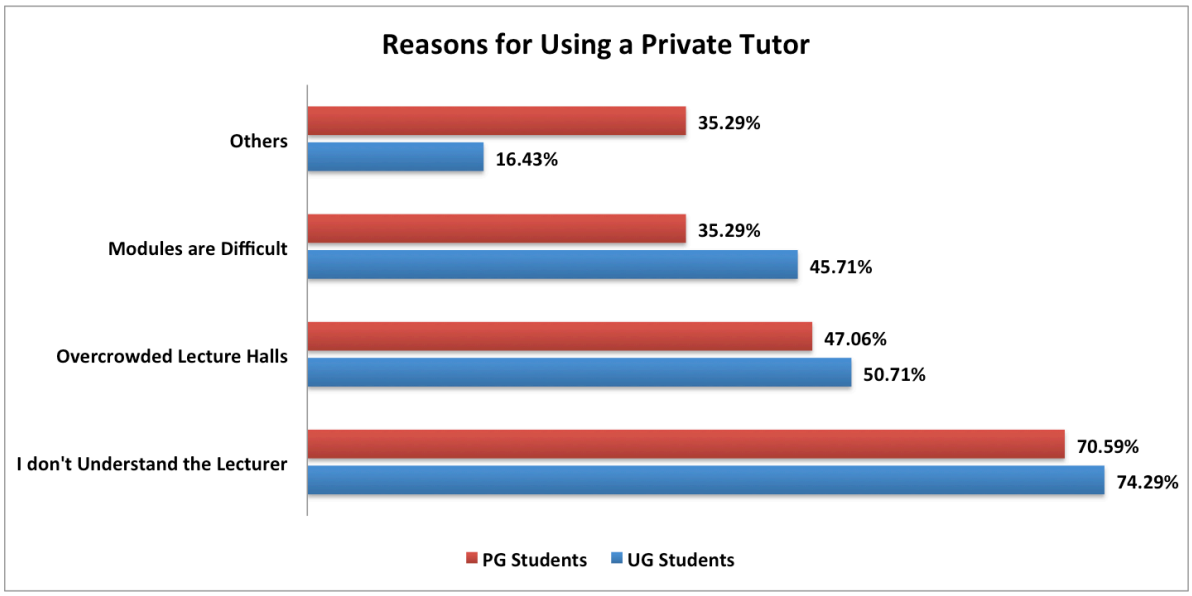

Figure 49: Reasons for Using a Private Tutor

Students attributed their need for private tutors to their view that no care or attention was given to the students or the subject, and that lecture halls are overcrowded and inappropriate, and that some students distracted the others. They added that they consider some academic staff to be incompetent and unable to drive home their points.

They also complained that teaching methods and the general environment do not encourage understanding and passion to study. They said that some lecturers do not show up on time, are not committed to the curricula and do not exert any effort to explain clearly.

The students mentioned that they take private courses in order to simplify the curricula and provide translations, since some materials are taught in English. They also cited the smaller groups of students in private courses and the private teachers' familiarity with the way subject teachers set exam questions.

As for lectures, postgraduate students were almost unanimous in their criticism of the academic staff's disregard for punctuality and even for turning up. One of the students said: "*there is no such thing as lectures, only research tasks students are asked to do*".

The academics on the other hand criticized the rampant phenomenon of private courses among students in some colleges. Some attributed the phenomenon to the huge number of students in lecture halls, and private tutoring being a habit ingrained in them from earlier school levels.

It is worth mentioning that undergraduate students estimate their average annual spending on private lessons at about EGP 2,176 compared to EGP 1,955 by postgraduate students. These figures might seem modest when directly converted into international currencies such as sterling: they come to GBP 185 and 166 respectively, at mid-2015 exchange rates[8]. However, if the sums are converted to purchasing power parity, which take relative wages, living standards and other contextual data into account, using 2013 World Bank and OECD data, the sums come to the somewhat more substantial GBP 843 and GBP 757 respectively.

Around 17% of private university undergraduate students currently use private tuition, despite the fact that they already pay for their education, although, as noted above, their reasons for doing so differ slightly from public university students.

5.3.3. Research

The Table below (Table 33) shows that over 78% of the postgraduate students expressed confidence in their research skills. More than 60% praised the supervisors' performance in mentoring and supervising their research, and added that their advice was closely relevant to their research topic. In addition, more than 57% of the postgraduate students said that they received help from their supervisor to carry out their research. On the other hand, less than 28% of them said that there is not enough time allocated by their supervisors to discuss their research.

[8] http://data.worldbank.org/indicator/PA.NUS.PPP I used a factor of 1.93 EGP to the USD and 0.7 GBP to the USD

Table 33: Statements on Research

	Strongly Agree	Agree	Nor Agree Nor Disagree	Disagree	Strongly Disagree	Not Applicable
I received good research supervision	30.47%	29.61%	13.73%	9.01%	6.44%	10.73%
The provided advices are relevant to my research	32.19%	30.47%	15.02%	9.44%	3.86%	9.01%
Supervisor helps to carry out my research	24.03%	33.05%	14.16%	12.02%	4.72%	12.02%
Supervisor allocates time to discuss my research	17.60%	27.04%	17.17%	17.60%	9.44%	11.16%
I have confidence in my research skills	28.33%	50.64%	9.44%	6.87%	1.73%	2.99%
My English is very good	25.32%	45.92%	12.02%	9.44%	3.87%	3.43%

The table below (Table 34) shows the descriptive statistics with confidence intervals that are ascending according to the mean, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 34: Descriptive Statistics on the PG Research Statements

PG Research Statements	N	*Md*	*M* (*SD*)	95% *CI*	Population Mean
I have confidence in my research skills	226	2	2.00 (0.91)	[2.88, 2.12]	2.23 ±5.99%
The provided advices are relevant to my research	212	2	2.15 (1.14)	[2.00, 2.30]	2.15 ±7.18%
I received good research supervision	208	2	2.23 (1.23)	[2.06, 2.40]	2.23 ±7.51%
Supervisor helps to carry out my research	205	2	2.32 (1.17)	[2.16, 2.48]	2.32 ±6.93%
Supervisor allocates time to discuss my research	207	2	2.71 (1.28)	[2.53, 2.89]	2.71 ±6.48%

On the academics' side, more than 74% of academics said that they allocate adequate time for discussions with the students (see Q12, Appendix 9.7), however less than 55% of academics expressed satisfaction with the number of research students under their supervision and 47% of academic staff reported insufficient time to carry out their own research. Less than 45% of academics expressed confidence in their students' research skills. It is worth noting that over 74% of academics believe they have insufficient funding to carry out their research (see Q10, Appendix 9.7).

Around 55% of the Masters and Ph.D. students expressed satisfaction with the time the supervisors spend with them, against less than 38% of the Higher Diploma students. It appears that supervisors generally do not allocate enough time to their research students; however more attention is given to Masters and PhD students than to Higher Diploma students (see Q15/4, Appendix 9.6.1).

On research aspects, academics complained about the lack of interest in the results of scientific research; the gaping schism between scientific research and its application in the community, and the fact that the energy of academic staff and research assistants is not used in making research applications, which

might be beneficial to society. They pointed to the inadequate funds, capabilities, and labs, and the absence of a favourable scientific and educational environment to work in. They further criticized the reliance on traditional methods in teaching and scientific research.

Some recommendations provided by the respondents from academic staff reflected what may be a lack of clear vision or awareness of the prerequisites, such as "*establishing think tanks that are a carbon copy of foreign universities, and providing more support and allocating more funds to scientific research*", "*training scientific researchers capable of carrying out international scientific research papers to contribute toward elevating the standards of scientific research*" and "*encouraging applicable scientific research rather that theoretical research*".

5.3.4. Academic Support

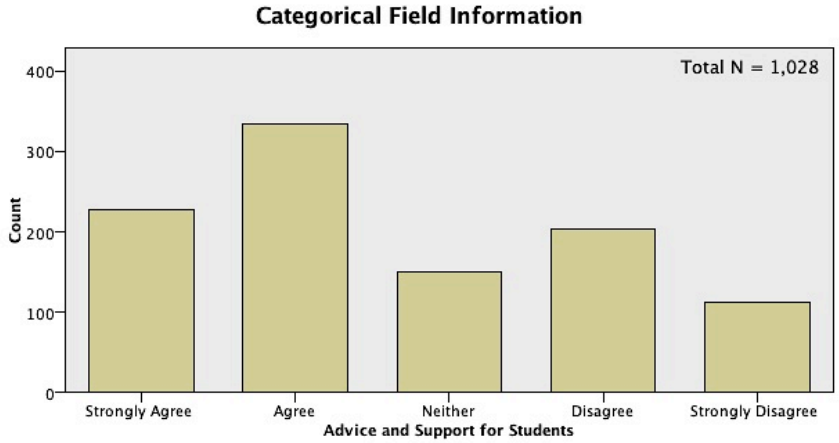

Figure 50: Advice and Support to Students by Academics

The table below (Table 35) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 35: Descriptive Statistics on the Advice and Support

Advice and Support for Students	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q12/1)	218	2	1.75 (0.71)	[1.65, 1.85]	318.14
PG (Q16/1)	233	3	2.79 (1.29)	[2.62, 2.96]	545.93
UG (Q17/1)	577	3	2.93 (1.35)	[2.82, 3.04]	576.00
Participants	1028	2	2.65 (1.31)	[2.57, 2.73]	

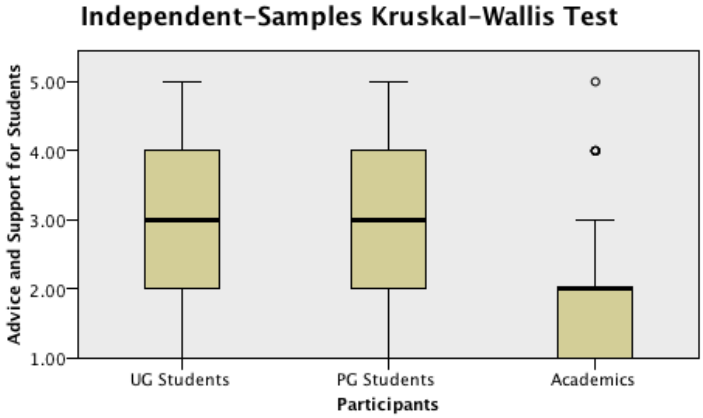

Figure 51: K-W Test (Advice and Support for Students)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG and PG groups, $H(2) = 130.19, p = 000$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than PG and UG students, $X^2 = (2, N = 1028) = 8.38, p = .000$, $X^2 = (2, N = 1028) = 11.25, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.65 ± 0.08.

Table 36: Pairwise Comparisons of Participants ((Advice and Support for Students)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	227.796	27.163	8.386	.000	.000
Academics-UG Students	257.862	22.917	11.252	.000	.000
PG Students-UG Students	30.066	22.375	1.344	.179	.537

Over 36% PG students and 39% of UG students stated that they receive neither support nor advice from academic staff, whereas less than 3% of academics

shared their views. It is worth mentioning that over 90% of academics stated that they provide ample advice and support to students.

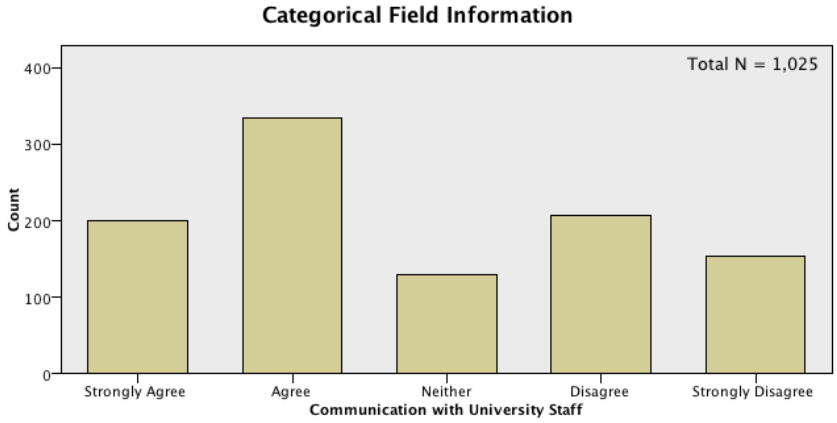

Figure 52: Communication with University Staff

The table below (Table 37) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 37: Descriptive Statistics on the Communication with University Staff

Communication with University Staff	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q12/2)	215	2	2.02 (0.87)	[1.90, 2.14]	358.50
UG (Q17/2)	577	3	2.97 (1.40)	[2.86, 3.08]	550.36
PG (Q16/2)	233	3	3.03 (1.41)	[2.85, 3.21]	563.05
Participants	1025	2	2.78 (1.36)	[2.70, 2.86]	

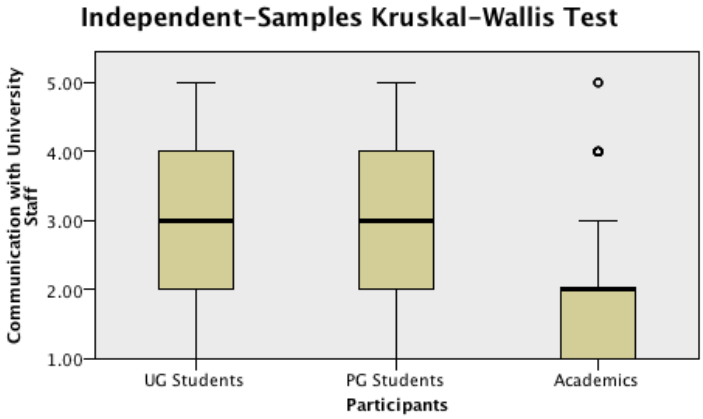

Figure 53: K-W Test (Communication with University Staff)

A Kruskal-Wallis H test showed a statistically significant difference among the

academics, UG and PG groups, $H(2) = 78.82, p = 000$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than PG and UG students, $X^2 = (2, N = 1025) = 7.52, p = .000$, $X^2 = (2, N = 1025) = 8.34, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.78 ± 0.08.

Table 38: Pairwise Comparisons of Participants (Communication with University Staff)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-UG Students	191.864	22.983	8.348	.000	.000
Academics-PG Students	204.547	27.201	7.520	.000	.000
UG Students-PG Students	-12.684	22.327	-.568	.570	1.000

Over 44% and 41% of PG and UG students respectively stated that they were not able to communicate with the academic staff, whereas less than 8% of academics shared their views.

In contrast to the responses given by students, over 80% of the academics at Egyptian universities and higher institutions stated that they communicate with their students on a regular basis.

Over 89% of academics said that they listen to and value their students' feedback and offer adequate support and advice to the students. However, less than 34% of academics were of the view that the university system gives the students chances to express their views about the elements of study (see Q12, Appendix 9.7).

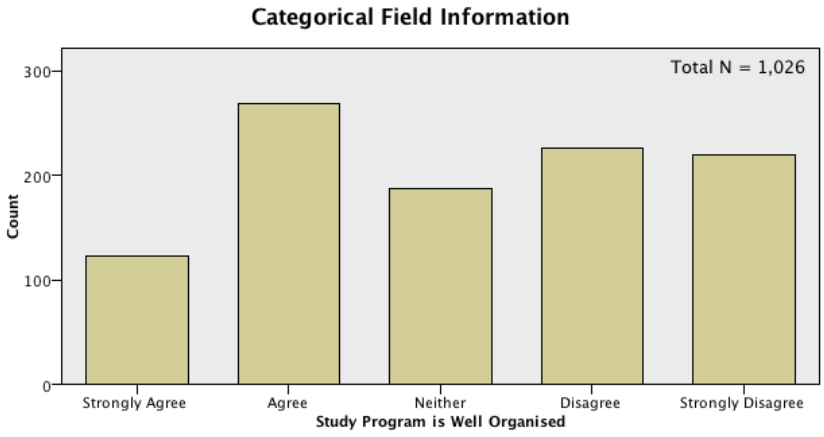

Figure 54: Organisation of Study Programme

The table below (Table 39) shows the descriptive statistics with confidence

intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 39: Descriptive Statistics on the Organisation of Study Programme

Study Program is Well Organised	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q10/7)	216	3	2.94 (1.19)	[2.78, 3.10]	467.60
PG (Q16/3)	233	3	3.10 (1.40)	[2.92, 3.28]	504.35
UG (Q17/3)	577	3	3.24 (1.36)	[3.13, 3.35]	534.38
Participants	1026	3	3.15 (1.34)	[3.07, 3.23]	

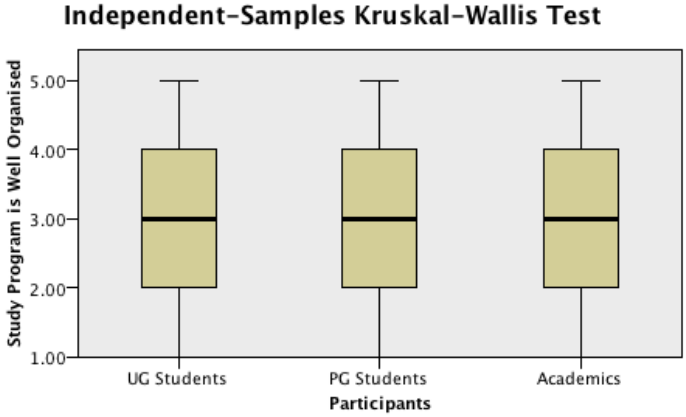

Figure 55: K-W Test (Organisation of Study Programme)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 8.67, p = .013$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than UG students, $X^2 = (2, N = 1026) = 2.89, p = .011$. However, the PG students did not differ significantly from UG students or Academics. The total population mean is 3.15 ± 0.08.

Table 40: Pairwise Comparisons of Participants (Organisation of Study Programme)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	36.750	27.331	1.345	.179	.536
Academics-UG Students	66.782	23.081	2.893	.004	.011
PG Students-UG Students	30.032	22.460	1.337	.181	.544

As for the organisation of the study programme, more than 44% of academics

believe that the study programme is well organised and running smoothly, while less than 35% of UG share their views. Over 40% of postgraduate students stated that the educational program was organised and running smoothly.

It is worth mentioning that 62% of academics expressed satisfaction with the number of teaching hours allocated to them, against less than 26% who have expressed dissatisfaction (see Q10/8, Appendix 9.7).

When comparing between private and public university UG students, we find a glaring discrepancy. More than 62% of private university students are satisfied with the provided academic advice and support, versus less than 43% of public university students. More than 79% of private university students expressed satisfaction with their ability to communicate with the academics, versus less than 44% of public university students. Also, 58% of private university students expressed satisfaction with the organization of the study programme, versus less than 34% of public university students (see Q17, Appendix 9.5.1).

5.3.5. Examinations and Assessments

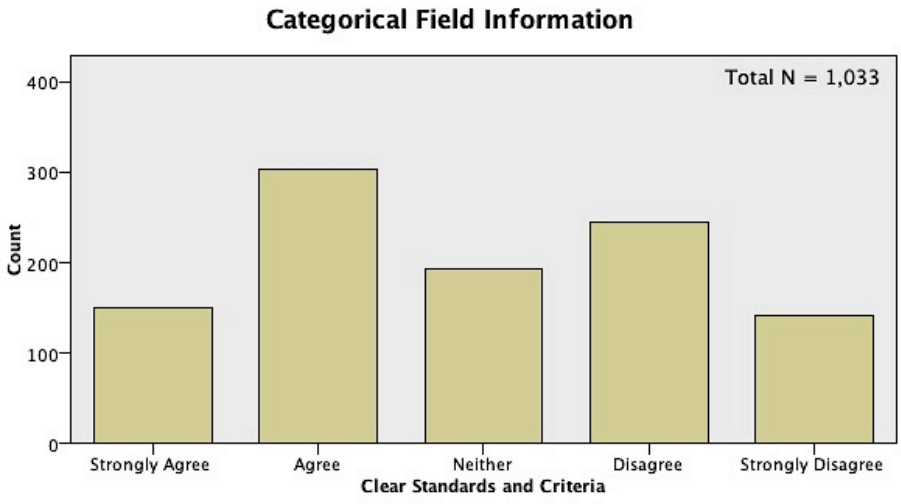

Figure 56: Clear Standards and Criteria

The table below (Table 41) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 41: Descriptive Statistics on the Clear Standards and Criteria

Clear Standards and Criteria	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q13/1)	223	2	2.70 (1.16)	[2.55, 2.85]	466.88
UG (Q18/1)	577	3	2.97 (1.30)	[2.86, 3.08]	527.06
PG (Q17/1)	233	3	3.03 (1.35)	[2.86, 3.20]	540.06
Participants	1033	3	2.92 (1.29)	[2.84, 3.00]	

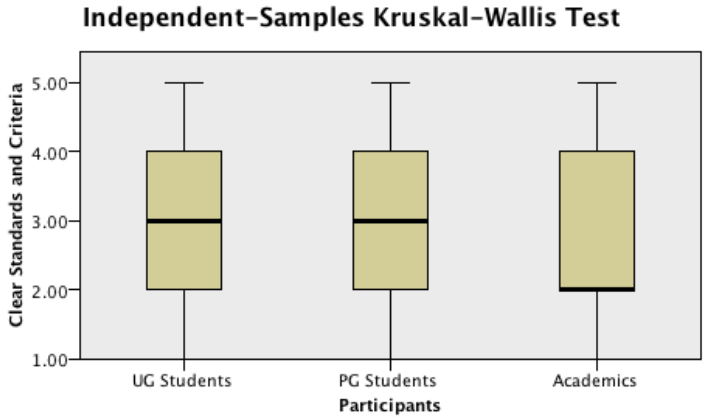

Figure 57: K-W Test (Clear Standards and Criteria)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 8.79, p = .012$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than PG and UG students, $X^2 = (2, N = 1033) = 2.63, p = .022$, $X^2 = (2, N = 1033) = 2.69, p = .026$. However, the PG students and UG students did not differ significantly. The total population mean is 2.92 ± 0.08.

Table 42: Pairwise Comparisons of Participants (Clear Standards and Criteria)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-UG Students	60.182	22.920	2.626	.009	.026
Academics-PG Students	73.177	27.231	2.687	.007	.022
UG Students-PG Students	-12.995	22.562	-.576	.565	1.000

Less than 43% of undergraduate students and less than 41% of postgraduate

students expressed satisfaction with the quality of examinations and standards applied. On the other hand, over 51% of academics believe that the criteria used in the evaluation and tests are made clear from the beginning.

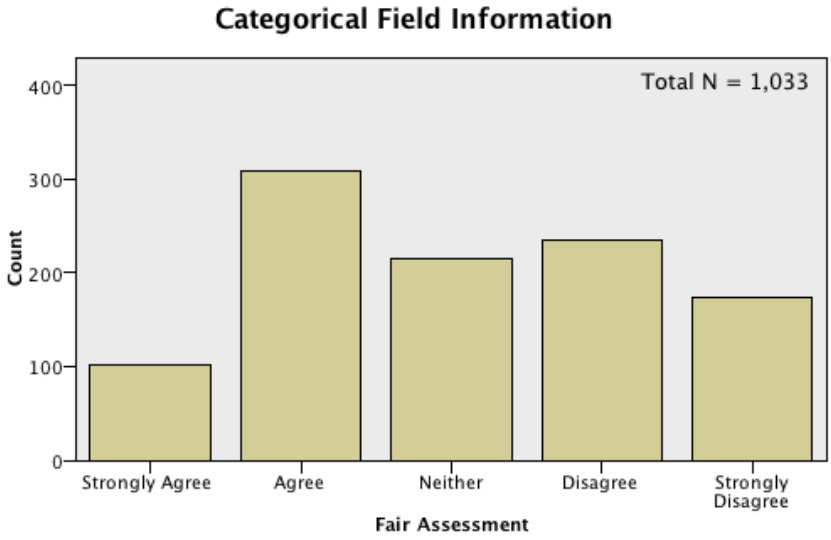

Figure 58: Fair Assessment and Marking

The table below (Table 43) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 43: Descriptive Statistics on the Fair Assessment and Marking

Fair Assessment	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q13/2)	223	3	2.86 (1.11)	[2.71, 3.01]	470.41
PG (Q17/2)	233	3	3.05 (1.30)	[2.88, 3.22]	513.39
UG (Q18/2)	577	3	3.15 (1.29)	[3.04, 3.26]	536.46
Participants	1033	3	3.07 (1.26)	[2.99, 3.15]	

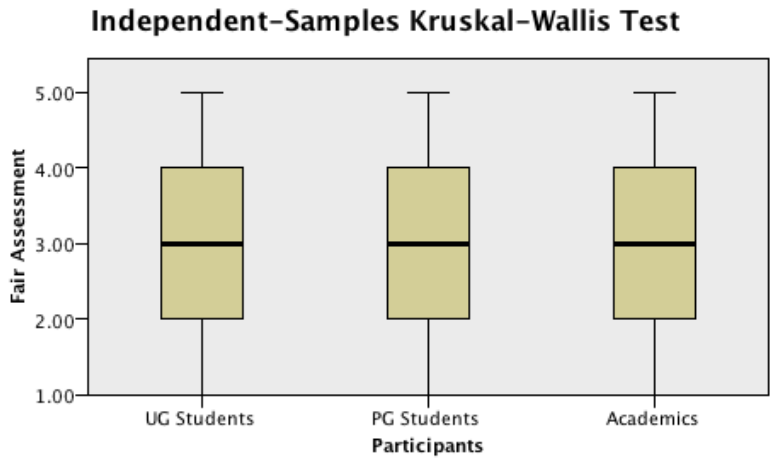

Figure 59: K-W Test (Fair Assessment and Marking)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 8.37, p = .015$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than UG students, $X^2 = (2, N = 1033) = 2.89, p = .012$. However, the PG students did not differ significantly from UG students or Academics. The total population mean is 3.07 ± 0.08.

Table 44: Pairwise Comparisons of Participants (Fair Assessment and Marking)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	42.982	27.199	1.580	.114	.342
Academics-UG Students	66.048	22.893	2.885	.004	.012
PG Students-UG Students	23.066	22.536	1.024	.306	.918

Less than 38%, 41% and 46% of the undergraduate students, postgraduate students and academics respectively viewed the assessments as fair.

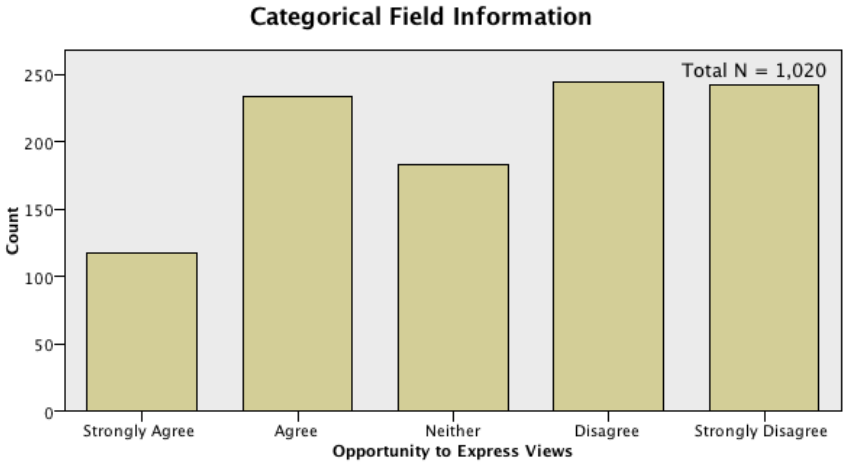

Figure 60: Opportunity to Express my Views

The table below (Table 45) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 45: Descriptive Statistics on the Opportunity to Express Views

Opportunity to Express Views	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
PG (Q17/4)	233	3	2.96 (1.41)	[2.78, 3.14]	449.51
ACA (Q12/5)	210	3	3.17 (1.17)	[3.01, 3.33]	488.04
UG (Q18/5)	577	4	3.40 (1.36)	[3.29, 3.51]	543.30
Participants	1020	3	3.25 (1.35)	[3.17, 3.33]	

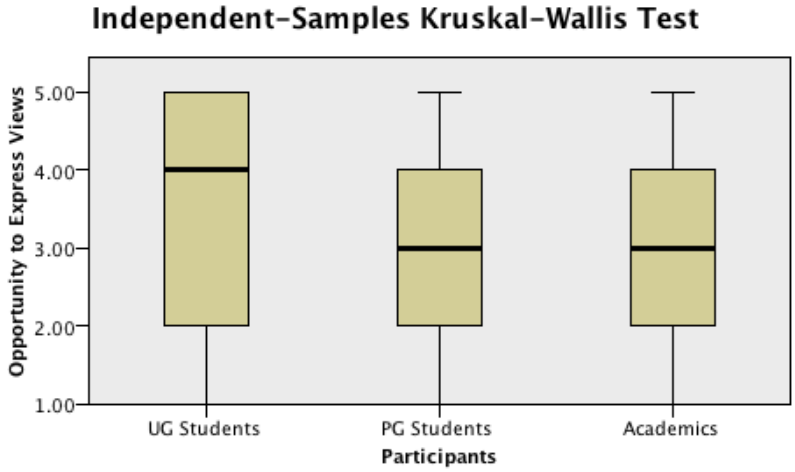

Figure 61: K-W Test (Opportunity to Express Views)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 19.26, p = .000$. A Chi-square multiple comparisons test revealed that the PG students scored a statistically significant lower mean rank than UG students, $X^2 = (2, N = 1020) = 4.20, p = .000$. However, the Academics did not differ significantly from UG students or PG students. The total population mean is 3.25 ± 0.08.

Table 46: Pairwise Comparisons of Participants (Opportunity to Express Views)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
PG Students-Academics	-38.530	27.373	-1.408	.159	.478
PG Students-UG Students	93.796	22.330	4.200	.000	.000
Academics-UG Students	55.266	23.184	2.384	.017	.051

Less than 30% and 34% of undergraduate students and academics respectively share the same view that students have ample opportunities to express their views, compared to more than 47% of postgraduate students.

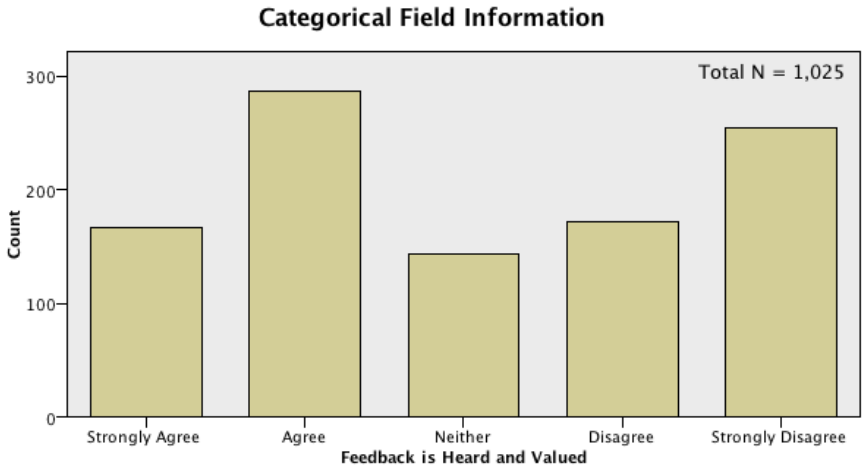

Figure 62: My Views and Feedback are Heard and Valued

The table below (Table 47) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 47: Descriptive Statistics on the Feedback is Heard and Valued

Feedback is Heard and Valued	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q12/1)	215	2	1.81 (0.67)	[1.72, 1.90]	265.51
PG (Q17/5)	233	3	3.05 (1.41)	[2.87, 3.23]	510.42
UG (Q18/6)	577	4	3.53 (1.40)	[3.42, 3.64]	606.26
Participants	1025	3	3.06 (1.45)	[2.97, 3.15]	

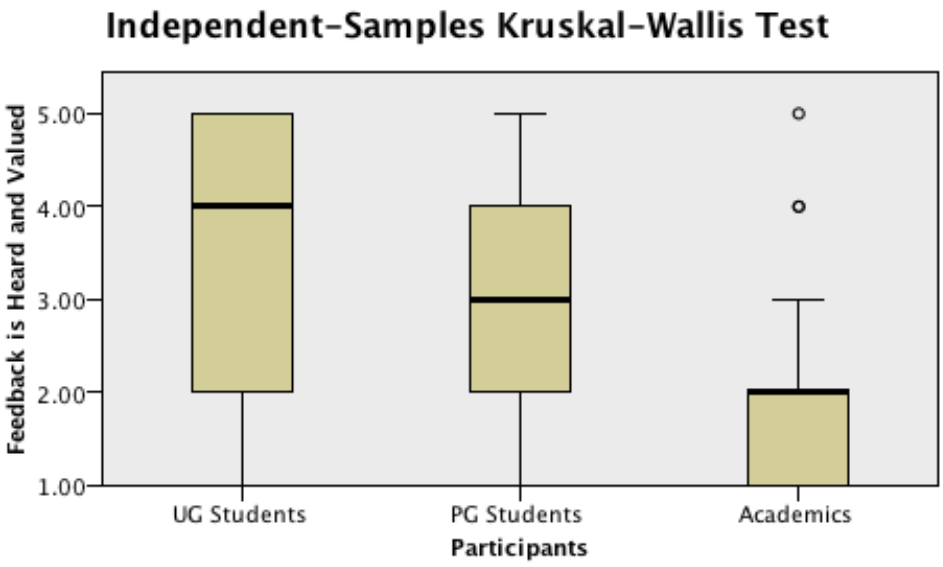

Figure 63: K-W Test (Feedback is Heard and Valued)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 218.28, p = .000$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than PG and UG students, $X^2 = (2, N = 1025) = 8.97, p = .000$, $X^2 = (2, N = 1025) = 14.77, p = .000$, whereas the PG students scored a statistically significant lower mean rank than UG students, $X^2 = (2, N = 1025) = 4.28, p = .000$. The total population mean is 3.06 ± 0.09.

Table 48: Pairwise Comparisons of Participants (Feedback is Heard and Valued)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	244.913	27.298	8.972	.000	.000
Academics-UG Students	340.751	23.065	14.774	.000	.000
PG Students-UG Students	95.837	22.406	4.277	.000	.000

There is a noticeable discrepancy between undergraduate students, postgraduate students and academics on the extent to which students' views are heard and valued: over 28%, 42% and 89% respectively are satisfied.

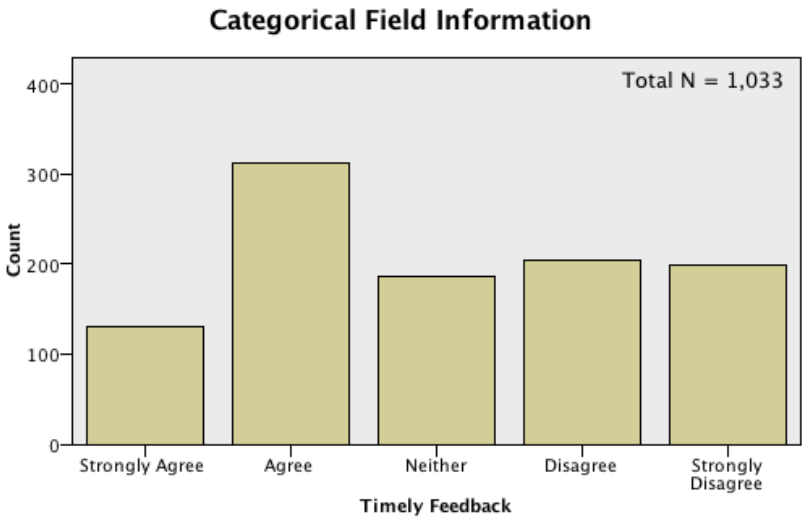

Figure 64: Timely Feedback

The table below (Table 49) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean range, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 49: Descriptive Statistics on the Timely Feedback

Timely Feedback	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q13/4)	223	2	2.46 (1.05)	[2.32, 2.60]	393.23
PG (Q17/3)	233	3	2.96 (1.41)	[2.78, 3.14]	499.41
UG (Q18/4)	577	3	3.28 (1.35)	[3.17, 3.39]	571.94
Participants	1033	3	3.03 (1.33)	[2.95, 3.11]	

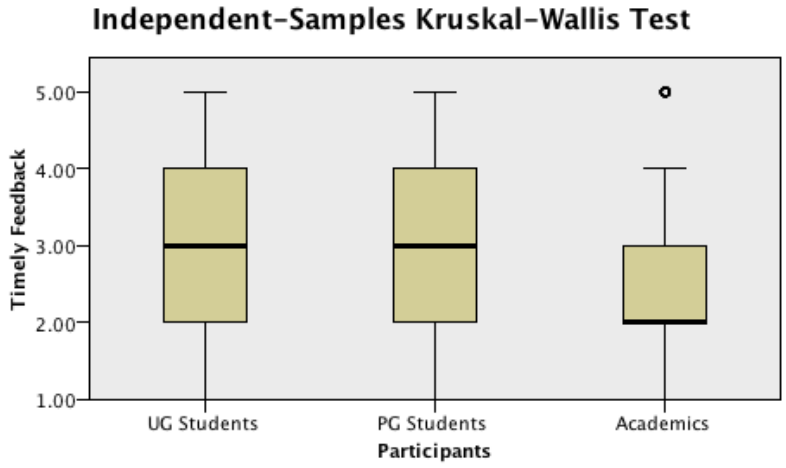

Figure 65: K-W Test (Timely Feedback)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 61.88, p = .000$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant lower mean rank than PG and UG students, $X^2 = (2, N = 1033) = 3.90, p = .000$, $X^2 = (2, N = 1033) = 7.80, p = .000$, whereas the PG students scored a statistically significant lower mean rank than UG students, $X^2 = (2, N = 1033) = 3.21, p = .004$. The total population mean is 3.03 ± 0.08.

Table 50: Pairwise Comparisons of Participants (Timely Feedback)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	106.177	27.235	3.898	.000	.000
Academics-UG Students	178.708	22.924	7.796	.000	.000
PG Students-UG Students	72.531	22.566	3.214	.001	.004

There is another noticeable discrepancy between undergraduate students, postgraduate students and academics on the extent to which academics give timely feedback: over 33%, 46% and 62% respectively are satisfied.

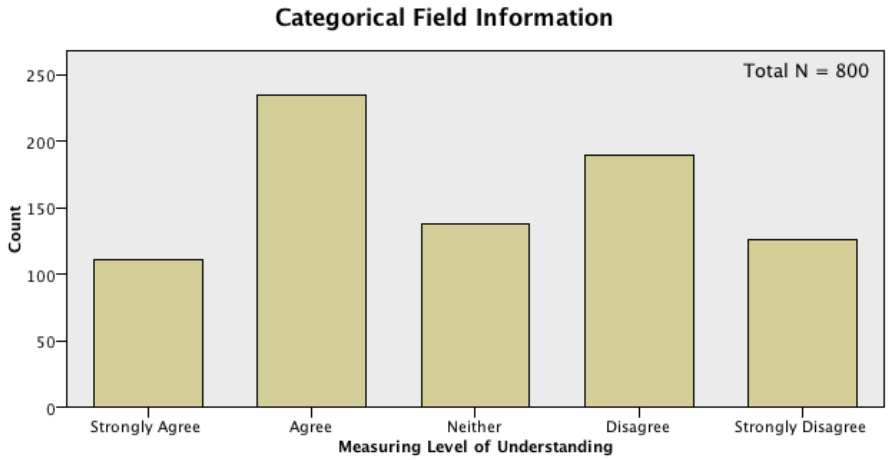

Figure 66: Measuring Level of Understanding

The table below (Table 51) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 51: Descriptive Statistics on Measuring Level of Understanding

Measuring Level of Understanding	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
ACA (Q13/3)	223	3	2.93 (1.16)	[2.78, 3.08]	392.67	87566.50
UG (Q18/3)	577	3	3.00 (1.36)	[2.89, 3.11]	403.52	232833.50
Participants	800	3	2.98 (1.31)	[2.89, 3.08]		

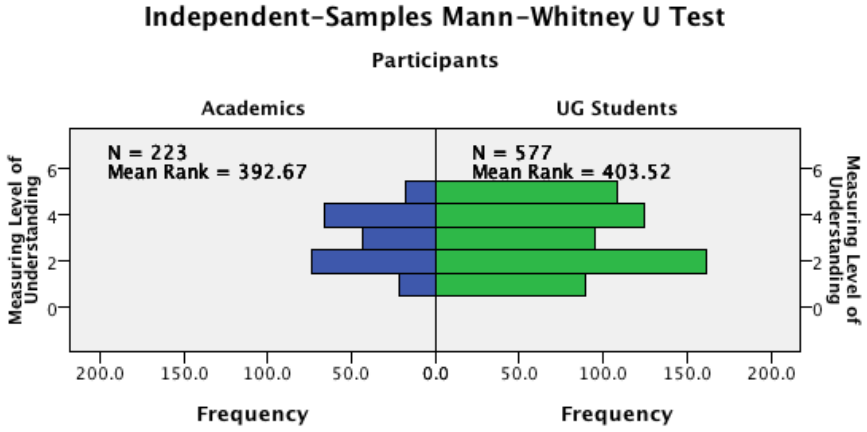

Figure 67: Mann-Whitney Test (Measuring Level of Understanding)

A Mann-Whitney U test revealed no statistically significant difference between PG and UG groups, $U(798) = 62590.50, \mathrm{z} = -.61, p = .54$. The total population mean is 2.98 ± 0.10.

Table 52: Test Statistics (Measuring Level of Understanding)

Mann-Whitney U	62590.50
Wilcoxon W	87566.50
Z	-.61
Asymptotic Sig. (2-tailed)	.54

Less than 44% of both academics and undergraduate students share the same view that tests measure the level of understanding and comprehension.

In general, students spoke unfavourably about the evaluation and grading system and about the focus on memorization rather than critical thinking. They also complained about the difficult tests and ambiguous assessment criteria. In addition, they expressed resentment toward the teachers' perceived 'unfair' marking and about the fact that the test schedule is compulsory and does not

take into account the students' circumstances.

One of the issues that they complained about was the fact that students are not allowed quickly to re-sit a failed test, and must instead wait until the following year, which puts more burdens on them in terms of the number of subjects they have to study and pass.

They also complained of the lack of transparency and about how difficult it is for students to view their test scripts after the results have been announced in order to learn from their mistakes or to make sure that the marking was not flawed. One of the students averred that students' grades are 'rigged'.

Students criticized the facts that their knowledge acquisition and ability levels were only measured through tests. One of the students spoke favourably of the credit hour system, but said that the tests and pressures of that system are enormous. Another student criticized the procedure of linking his oral test grades to his attendance in some subjects.

Students criticized the lack of supervision over the test marking process, and a lack of clear marking criteria. They also complained about the focus on theoretical exams, which measure students' abilities to regurgitate memorized knowledge, and not their critical thinking and comprehension skills.

The students stated that there was no real ways of monitoring the amount of knowledge acquisition, or of their attendance, which might be effective and free of rigging. These would in the end provide only a general summary of the competency of students as well as that of the educational process.

On the issue of private universities, the responses vary between private and public undergraduate university students. We find that more than 37% of public university students expressed dissatisfaction with the examinations and the standards applied in the assessment and examination process, versus less than 29% of private university students. More than 42% of public university students deemed the assessments to be unfair, versus less 25% of private university students. As for the lecturers' role in providing the students with feedback in a timely manner, more than 49% of public university students expressed dissatisfaction, versus less than 30% of private university students. It should be noted that over 53% of public university students believe their

feedback on their studies is not taken into consideration and that they have no opportunities to express their views, versus less than 38% of private university students (see Q18, Appendix 9.5.1).

Despite the higher ratio of satisfaction among private university students comparing with public university students, the statistical significance can't be calculated due to the low number of responses from private universities (less than 30 responses).

This section has answered the first research question on how stakeholders (UG students, PG students and academics) perceive higher education in terms of education, which includes curricula, teaching, research, academic support, and examination and assessments.

5.4. Student Support

5.4.1. Resources and Facilities

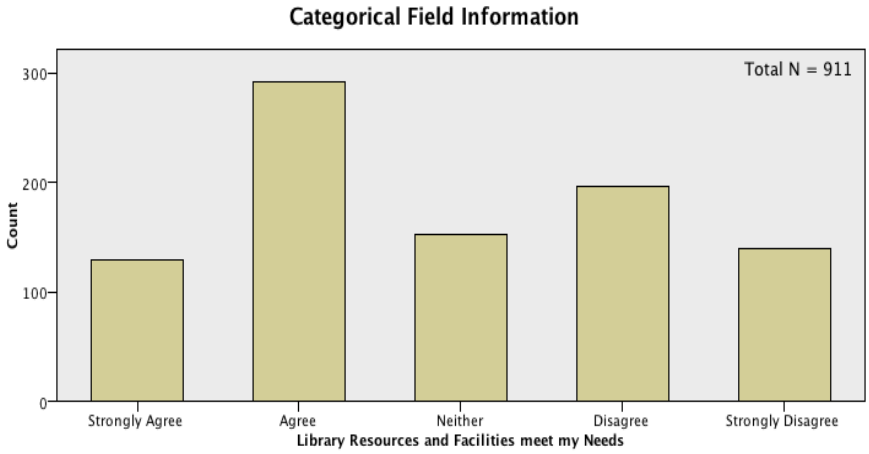

Figure 68: Library Resources and Facilities

The table below (Table 53) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 53: Descriptive Statistics on Library Resources and Facilities meet my Needs

Library Resources and Facilities Meet my Needs	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q19/1)	495	2	2.67 (1.26)	[2.56, 2.78]	408.07
PG (Q18/1)	205	3	3.02 (1.41)	[2.83, 3.21]	474.19
ACA (Q14/1)	211	4	3.40 (1.18)	[3.24, 3.56]	550.78
Participants	911	3	2.92 (1.31)	[2.83, 3.01]	

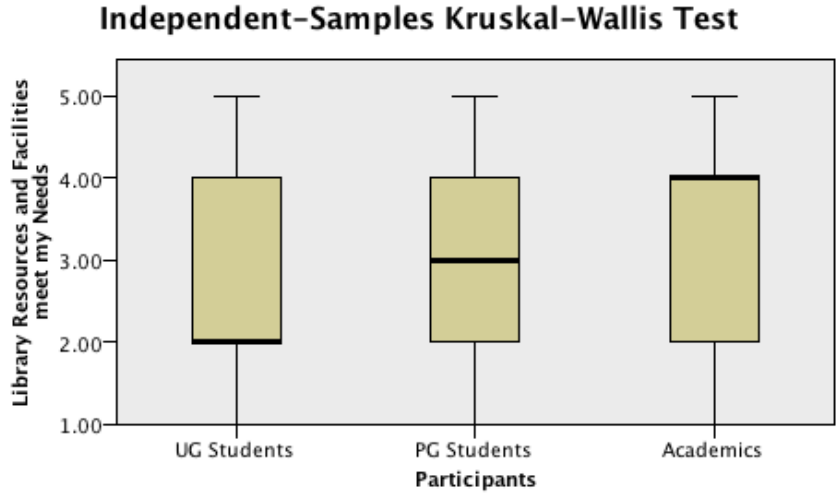

Figure 69: K-W Test (Library Resources and Facilities)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 47.35, p = .000$. A Chi-square multiple comparisons test revealed that the UG Students scored a statistically significant lower mean rank than PG and Academics, $X^2 = (2, N = 911) = -3.11, p = .006$, $X^2 = (2, N = 911) = -6.78, p = .000$, whereas the PG students scored a statistically significant lower mean rank than Academics, $X^2 = (2, N = 911) = -3.05, p = .007$. The total population mean is 2.92 ± 0.09.

Table 54: Pairwise Comparisons of Participants (Library Resources and Facilities)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-PG Students	-66.121	21.254	-3.111	.002	.006
UG Students-Academics	-142.713	21.039	-6.783	.000	.000
PG Students-Academics	-76.592	25.096	-3.052	.002	.007

There is a noticeable discrepancy between undergraduate students, postgraduate students and academics on the extent to which library resources and facilities meet their needs. Where applicable, over 52%, 46% and 32% respectively are satisfied, while over 14% of undergraduate students, 12% of postgraduate students and 5% of academics stated that there was no library.

One student criticized the sole reliance on university textbooks and other student pointed out that the library shuts its doors at 5 p.m., which is too early for postgraduate students, most of whom are employees who finish work in the afternoon.

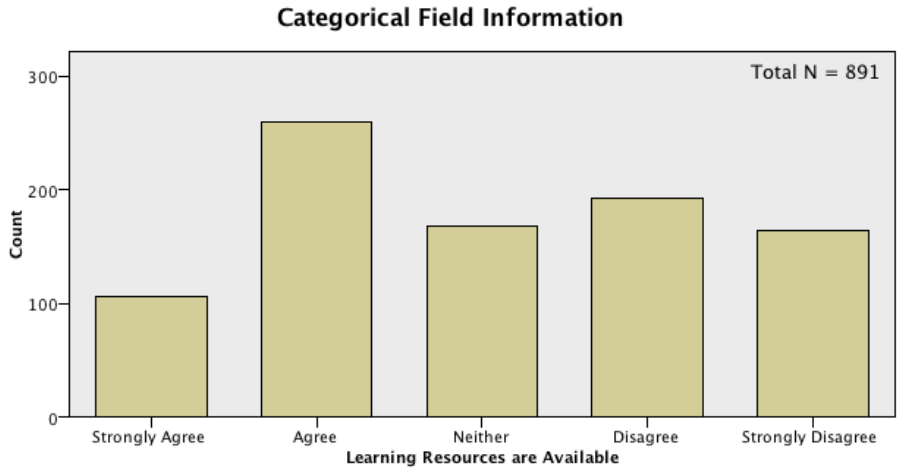

Figure 70: Learning Resources are Available

The table below (Table 55) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 55: Descriptive Statistics on Learning Resources are Available

Learning Resources are Available	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q19/4)	482	3	2.90 (1.32)	[2.78, 3.02]	415.64
PG (Q18/4)	204	3	3.19 (1.38)	[3.00, 3.38]	470.84
ACA (Q14/4)	205	3	3.30 (1.17)	[3.14, 3.46]	492.66
Participants	891	3	3.05 (1.31)	[2.96, 3.14]	

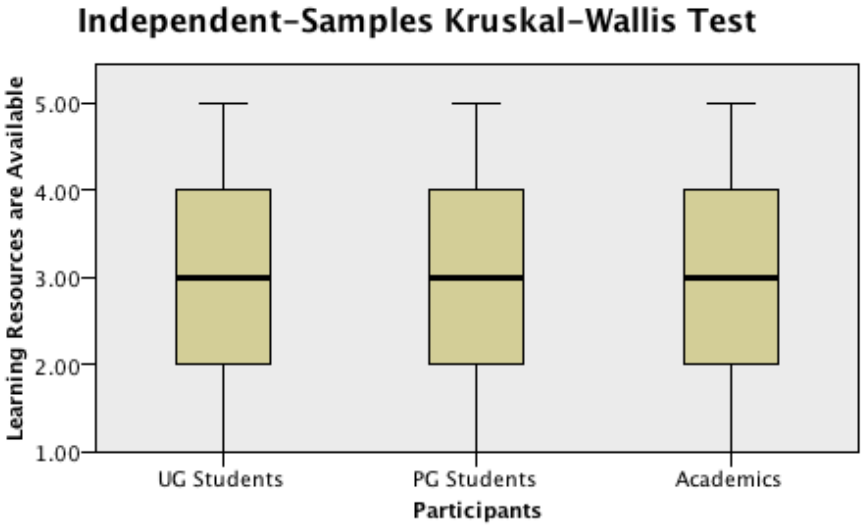

Figure 71: K-W Test (Learning Resources are Available)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 16.50, p = .000$. A Chi-square multiple comparisons test revealed that the UG students scored a statistically significant lower mean rank than PG and Academics, $X^2 = (2, N = 891) = -2.63, p = .025$, $X^2 = (2, N = 891) = -3.68, p = .001$. However, the PG students and Academics did not differ significantly. The total population mean is 3.05 ± 0.09.

Table 56: Pairwise Comparisons of Participants (Learning Resources are Available)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-PG Students	-55.202	20.956	-2.634	.008	.025
UG Students-Academics	-77.017	20.920	-3.682	.000	.001
PG Students-Academics	-21.815	24.811	-.879	.379	1.000

Over 46% of undergraduate students against less than 34% of academics and 38% of postgraduate students reported a satisfaction with learning resources such as scientific books, journals, and others, whether printed or electronic.

Students unanimously highlighted a lack of learning and research resources, with a lack of reference books and resources for science subjects cited as the most critical negative aspect among learning resource problems.

Postgraduate students complained about the lack of resources needed to study

and do research, and the fact that libraries do not acquire new foreign or Arabic books, periodicals or journals, which means that students have to waste time, money and effort to obtain them. Some students criticized the neglect suffered by libraries and library collections.

Some academics mentioned a shortage of books, various reference materials, equipped labs, and lack of local and international educational resources, especially for postgraduate students. They also criticized what they saw as the greed of many academics selling their books. One of the students complained about the high cost of university textbooks by academics, saying they are overpriced despite their low quality in terms of knowledge content. The respondents called for the development of the tools available for teaching as well as teaching resources and university textbooks which, they claimed, need revision and should get approval from the department or college before being taught. Alternatively, international books and reference material should be used.

Among the other negative aspects mentioned is a lack of care given to digital libraries - where they exist - on the university website. Despite numerous MoHE funded projects (see ICTP at section 3.6.1) for digital libraries and e-learning resources across all public universities.

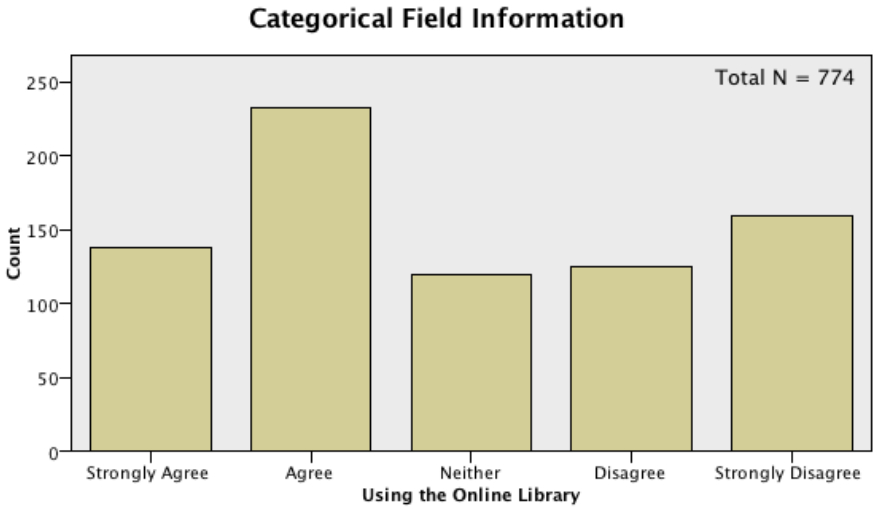

Figure 72: Using University's Online Library

The table below (Table 57) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 57: Descriptive Statistics on Using University's Online Library

Using the Online Library	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q14/5)	208	2	2.65 (1.30)	[2.47, 2.83]	347.54
PG (Q18/5)	192	3	2.91 (1.51)	[2.70, 3.12]	384.39
UG (Q19/5)	374	3	3.07 (1.40)	[2.93, 3.21]	411.32
Participants	774	3	2.92 (1.41)	[2.82, 3.02]	

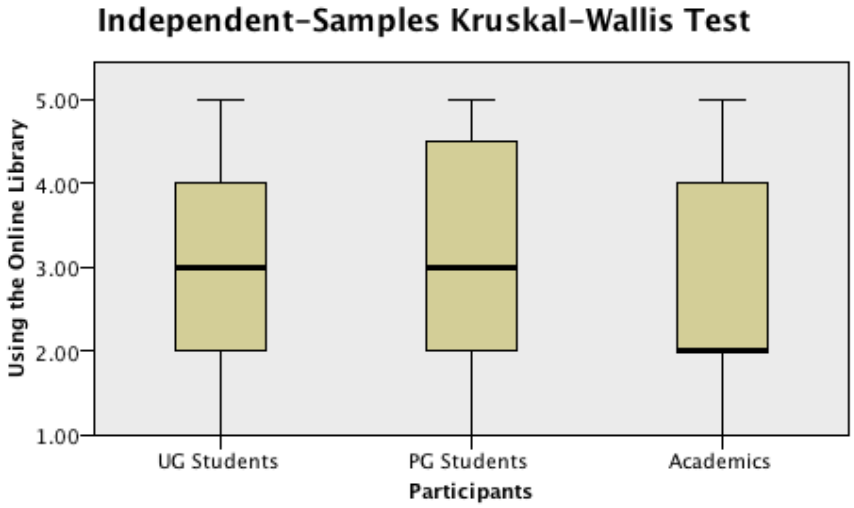

Figure 73: K-W Test (Using University's Online Library)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 11.49, p = .003$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant lower mean rank than UG students, $X^2 = (2, N = 774) = 3.38, p = .002$. However, the PG students did not differ significantly from UG students or Academics. The total population mean is 2.92 ± 0.10.

Table 58: Pairwise Comparisons of Participants (Using University's Online Library)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	36.845	21.818	1.689	.091	.274
Academics-UG Students	63.781	18.857	3.382	.001	.002
PG Students-UG Students	26.937	19.355	1.392	.164	.492

Where applicable, over 40% of undergraduate students, 49% of postgraduate students and 58% of academics reported accessing the e-library via the university's website, while more than 35% of undergraduate students, 17% of postgraduate students and 6% of academics reported the lack of an e-library.

It is worth mentioning that answers vary between private and public undergraduate students. We find (where applicable) that more than 72% of private university students believe that the library resources and services are sufficient, versus less than 52% of public university students. More than 71% of private university students reported the availability of learning resources such as scientific books, journals, and others, whether printed or electronic, versus 45% of public university students. No more than 41% of public university students said they have accessed the e-library, versus 50% of private university students (see Q19, Appendix 9.5.1).

As for issues with building facilities, students criticized university buildings as being unsuitable for learning and lacking services and labs necessary to attract and encourage students' love for learning. They further claimed that where such labs are available, their equipment was old and worn out and needed maintenance. The students complained that sometimes they have to buy their own equipment.

In terms of lecture halls, students cited that these are unsuitable for teaching, overcrowded and unclean. One student of a paid languages programme at a public university complained that despite the high fees paid, there were still no adequate lecture spaces. Another student claimed that the university has no real intention to provide learning facilities to the students, citing as an excuse their high costs. One of the students, however, said that some lab equipment for lecture halls could be produced and installed by computer and engineering students in order to avoid some of the financial cost.

The academics said that the students do not have the necessary resources in terms of books, various scientific reference materials, and equipped labs. They also talked about the shortage of resources and equipment, and the need to provide the latest logistical equipment in order to make the educational process effective and easy. One of the respondents called for the completion of the infrastructure of labs and other facilities.

Another academic criticized a lack of proper offices suitable for academic staff. The respondent stated that this constitutes an important issue for many reasons: firstly, it seems unreasonable to force two or more members of the academic staff into one cramped office and then expect them to communicate with the students. Secondly, academic staff members consider this to be demeaning to their position within the university. Thirdly, it is an obstacle in the way of the education process because the academic staff will spend their time chatting rather than making achievements and developing new ideas.

They also complained about the lack of tools that can help students' creativity, the lack of labs that are up to scientific research standards, the lack of lab equipment as well as low funds. Most of the respondents complained about the unsatisfactory and substandard lab and field tools. They also complained about the huge number of students in lecture halls, and the short hours available to teach due to limits on space.

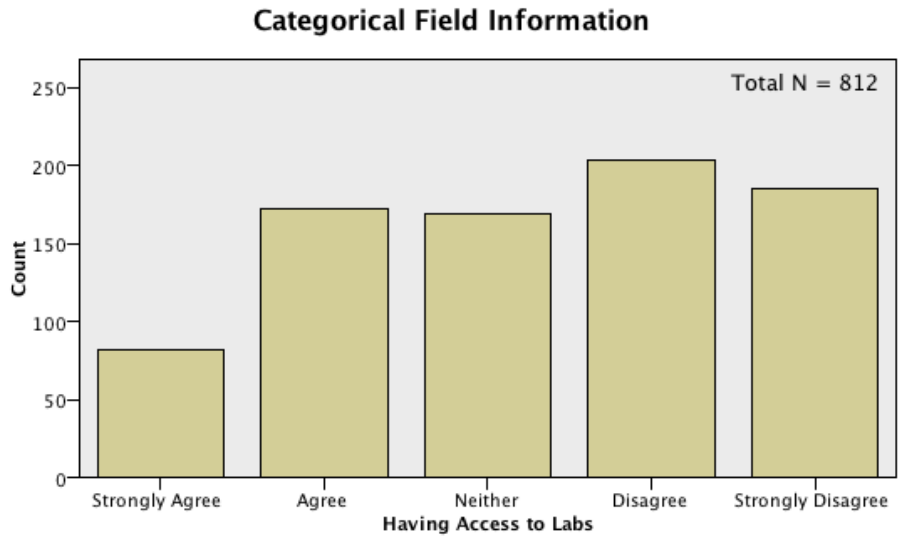

Figure 74: Having Access to Labs

The table below (Table 59) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 59: Descriptive Statistics on Having Access to Labs

Having Access to Labs	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q19/3)	429	3	3.15 (1.32)	[3.02, 3.28]	381.21
PG (Q18/3)	182	4	3.37 (1.36)	[3.17, 3.57]	421.12
ACA (Q14/3)	201	4	3.54 (1.16)	[3.38, 3.70]	447.23
Participants	812	3	3.29 (1.30)	[3.20, 3.38]	

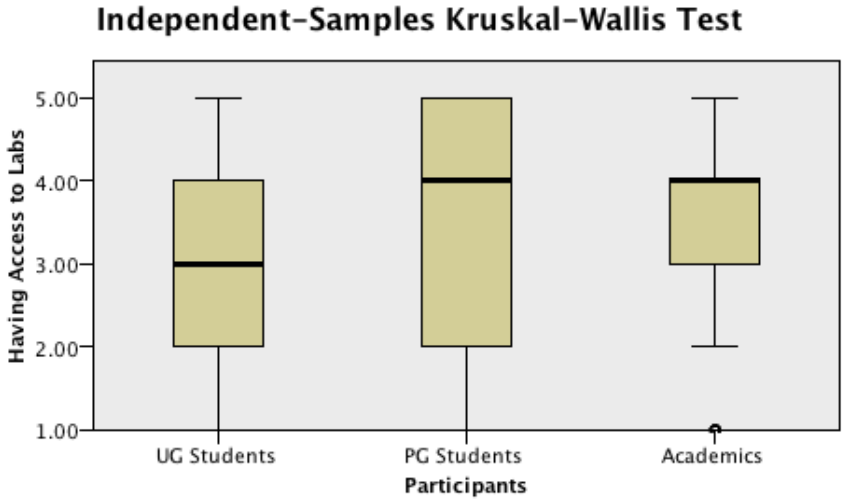

Figure 75: K-W Test (Having Access to Labs)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 12.34, p = .002$. A Chi-square multiple comparisons test revealed that the UG students scored a statistically significant lower mean rank than Academics, $X^2 = (2, N = 812) = -3.37, p = .002$. However, the PG students did not differ significantly from UG students or Academics. The total population mean is 3.29 ± 0.09.

Table 60: Pairwise Comparisons of Participants (Having Access to Labs)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-PG Students	-39.906	20.253	-1.970	.049	.146
UG Students-Academics	-66.014	19.569	-3.373	.001	.002
PG Students-Academics	-26.108	23.426	-1.115	.265	.795

Where applicable, more than 34% of UG students against less than 24% of academics reported their ability to access specialized devices, laboratories, and rooms whenever needed. This compares to less than 32% of postgraduate students.

It is worth mentioning that less than 34% of public university students said that they were able to access specialized devices, laboratories, and rooms whenever needed, versus 55% of private university students (see Q19, Appendix 9.5.1).

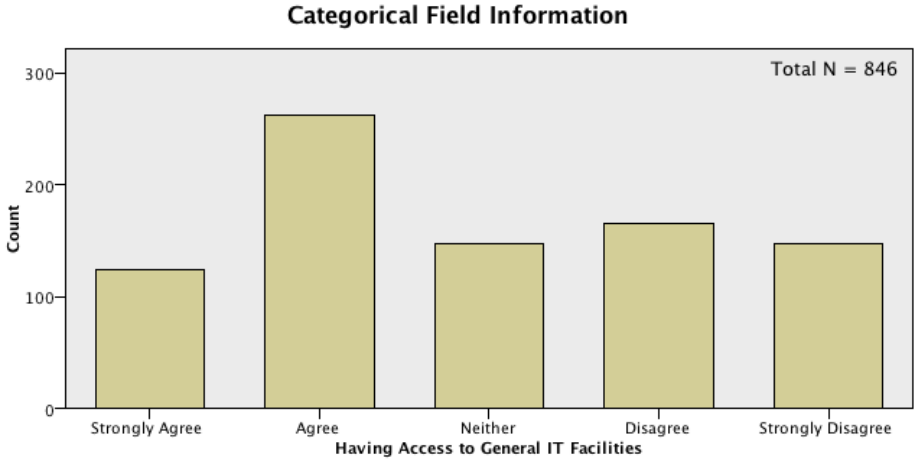

Figure 76: Having Access to General IT Facilities

The table below (Table 61) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 61: Descriptive Statistics on Having Access to General IT Facilities

Having Access to General IT Facilities	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q19/2)	451	3	2.86 (1.33)	[2.74, 2.98]	408.75
ACA (Q14/2)	207	3	3.03 (1.25)	[2.86, 3.20]	440.21
PG (Q18/2)	188	3	3.05 (1.43)	[2.84, 3.26]	440.46
Participants	846	3	2.94 (1.34)	[2.85, 3.03]	

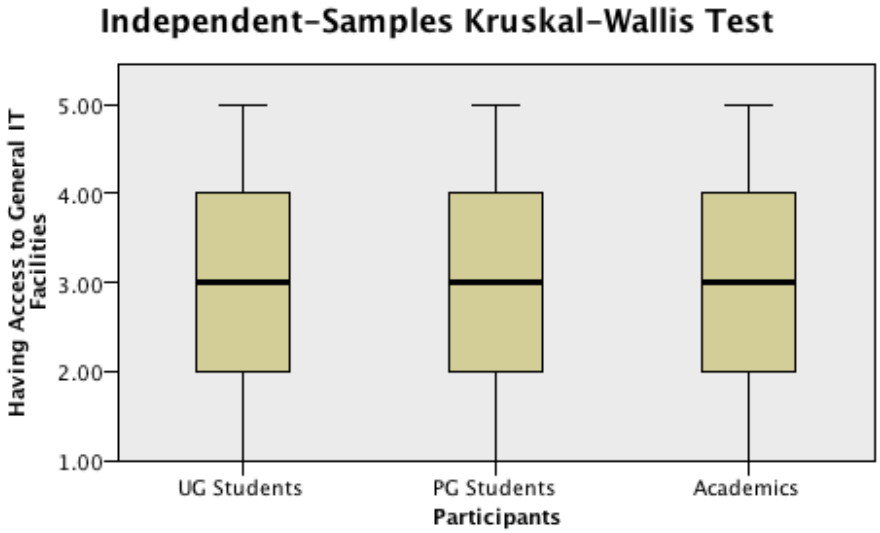

Figure 77: K-W Test (Having Access to General IT Facilities)

A Kruskal-Wallis H test revealed no significant differences between the UG, PG and Academics groups, $H(2) = 3.71, p = .157$. The total population mean is 2.94 ± 0.09.

Less than 43% of academics, 45% of PG students and 48% UG students can access IT resources such as computers and other devices when needed.

There appears to be an issue relating to the management (including maintenance) of facilities and IT resources, since the lack of IT resources is reported by less than 20% of students while over 60% of them reported lack of access to these resources.

It is worth mentioning that over 57% of private university students can access IT resources such as computers and devices whenever needed, versus less than 38% of public university students (see Q19, Appendix 9.5.1).

5.4.2. Students' Union and Welfare Services

More than 10% of undergraduate students and more than 18% of postgraduate students reported a lack of any services or activities at the university, while less than 48% of undergraduate students and less than 38% of postgraduate students expressed satisfaction with the services and activities provided or allowed by the university. These services include accommodation, food, and social care services, in addition to sports, social, cultural, and art activities, as well as the services provided by the Students' Union and Youth Welfare (see Q20 and Q19, appendices 9.5 and 9.6 respectively).

The students also complained about the lack of real activities or student union activities, and the fact that the management of such activities was left to students who have no time, are older or not interested. They said activities included little physical activity and were limited to parties and trips. One student criticized the youth care department at the university, saying they are not doing their job.

Some of the academics addressed the issue of student unions and youth care and their role in nurturing the minds of the students and raising their awareness about issues of benefit to them.

5.4.3. Administration

The following sub themes emerged during the qualitative analysis of the open questions to undergraduate and postgraduate students (on the positive and negative aspects of their university experience) and to the academics (on the higher education problems) (see Q28 Appendix9.1.2, Q26 Appendix9.2.2 and Q19 Appendix9.3.2).

Lecture Timetables

Undergraduate students criticized the lack of organisation when scheduling lectures, and the fact that there was no consultation or coordination with the students concerning schedules (see Table 39, 'Descriptive Statistics on the Organisation of Study Programme'). They also complained that their lectures timetable failed to take into account students' circumstances and traffic conditions. They felt that this was compounded by the fact that lecturers were sometimes not punctual, might even fail to turn up, or failed to manage the lecture time well, wasting time writing on the blackboard or discussing irrelevant issues.

Casual jobs

Students also complained about the absence of casual job opportunities for students at universities. Universities are capable of utilising student time and energy in various areas of work around campus, to improve the services and release some of the pressure from staff, for a relatively nominal amount of money. However, it the university administration's reluctance to do so that gives

rise to the suspicion that university leaders fear that students may expose the substandard performance by some university staff as well as expose the darker side of university administration activities. It is, depressingly, common knowledge that some university staff receive a considerable income from bribes.

Communication and complaints mechanism

No mechanism is in place for complaining or to elicit students' feedback or measure satisfaction of the education or services provided. Hence, most of the universities have considerable numbers of court cases against them. Some students complained of the lack of direct communication with the academic staff when there is a complaint, and lack of control over communication channels inside the university.

Students criticized what they saw as a monopoly by the university staff on opinions without paying heed to the students' views or listening to their criticism, demands or complaints about the quality of education. Furthermore, they criticized how 'limited resources' were continually used as an excuse, when there were open source applications and cheap, easy-to-install devices.

Students stated that they were not given any guidance, whether in terms of services or education, particularly to new students. They criticized the difficulties they face when trying to obtain administrative information regarding things such as official procedures. They further complained about the lack of information on the university's official website or on notice boards where information can be seen by students. Instead, students have to stand in long queues just to enquire about some procedure. One of the students said that the whole system needed a radical restructuring.

Credit Hours

One student called for restructuring the whole educational system and adopting the credit hour system like many universities abroad. Other students also mentioned that applying the credit hour system would be a positive change, as there are cases when a student would pass the second term without completing the first. They explained that this happens when a student who failed a subject in the first semester goes on to study the second part of the subject in the

second semester, even though they were not sufficiently established in the subject. Another student complained that they were not given the chance to resit a subject they had failed as soon as possible, and instead were forced to wait to resit it the following year.

Laboratories

The students complained of being effectively blackmailed by lab porters who refused to give them material or use the equipment – if any are available - unless they pay bribes. Furthermore, if the student happens to break any equipment by accident, they must deal directly with the lab porter, not an accountability panel. Thus, the student ends up paying more than the actual cost of the broken equipment and moreover, the money goes to the porter rather than the university.

Exam papers

Students criticized not being given the chance to view their test scripts after the results are announced, in order to see how they did, or even to ensure that there were no marking errors.

Information technology systems

Students also complained about the lack of information technology systems, causing delays, inefficiency and corruption. As an example, they said that students have to register on paper as well as electronically at the university administration and the academic guidance office, thus a lot of time and energy is wasted.

Ambiguity and lack of transparency

Postgraduate students in particular complained of red tape taking up too much of their time. They also complained of the ambiguity of bylaws set up by department and division heads. They added that even some rectors find the bylaws difficult to understand, let alone the students in question. They also criticized the failure of bylaws to keep up to date with new developments and issues, and the ambiguity surrounding the fees. The students felt strongly about the fact that only one or two people were involved in drawing up the bylaws, thus making them the sole decision-makers on crucial matters. They said that

this negatively affected students' performance and satisfaction levels, as well as their rights.

Other negative aspects included the extreme difficulty in getting any letters or statements required from the college. The respondents also complained that students have to pay unjustified fees for any letter, even normal correspondence sent out from the college. They criticized the ambiguity of the students' handbook and its failure to provide the minimum acceptable level of answers to students' enquiries. Furthermore, the students expressed discontent at the lack of help they are offered in choosing their modules.

There was a general sense that corruption is rampant, particularly on university committees in charge of promoting the professors and assistants. The respondents attributed this to a lack of transparency and objective criteria, as well as the incomplete independence of the universities.

Academics also complained about the out-dated rules, administrative bylaws, financial system and the deterioration of the whole administrative structure.

Accountability

Students criticized the lack of accountability when it comes to the academic staff; allowing them to abuse their authority against the students and threaten them with an F-grade regardless of their performance or the exam criteria. They called for the setting up of accountability measures for academic staff. A number of students also complained about the lack of penalties for violators of public laws inside the campus, as well as rampant and glaring laxity in the exercise of disciplinary action. Some students pointed to the lack of discipline both on the part of students and academic staff.

One student suggested establishing a rule whereby if more than a specified number of students fail a subject then the professor should be held accountable. Students also criticized the absence of transparency or monitoring of the test-marking process.

Postgraduate students mentioned the absence of any mechanism to hold administration staff or academics accountable for being late or for frequent absences from their desks. They also mentioned that academics abuse their power over students, for instance by asking them to purchase certain textbooks,

or by offering insufficient answers to their queries.

The academics confirmed the absence of adequate standards for accountability and for hiring at universities, as well as the prevalence of favouritism, and the absence of punitive actions in cases of scientific misconduct.

Some academics pointed out that there was no real control over the academic staff at state-run universities. Academics also criticised the lack of full-time dedication. There is a conflict of interest issue, in that many academics do work for other private universities and institutes, which negatively affects their performance at state-run institutions. It is likely that a considerable number of academics of private universities are part-time staff alongside their original posts in public faculties.

Other academics suggested exercising monitoring over academic staff so they will not misuse their authority to harass students or threaten them with low grades. Others mentioned that academic staff use students to run their personal errands, and that they publish useless books which they sell for exorbitant prices.

Leadership

Negative aspects that were mentioned included failure to rotate department presidency or deanship positions among the academics, resulting in the stagnation of the educational process and its monopolization by one person's vision. Academics criticized the fact that division heads are given their positions based on seniority or other reasons, not scientific proficiency.

Many academics lamented the stagnation of the leadership's mentality and their reluctance to accept innovative ideas put forward by researchers regardless of how worthwhile these are. They felt that their role in decision-making was greatly marginalised.

Training and Development: Academics complained that there were insufficient professional development courses, and that training courses given to them were mostly a matter of formality for the sake of promotion, and that course instructors were frequently unqualified. Many respondents expressed their frustration at the fact that their practical and applied skills were not developed, especially in practical colleges. They pointed out that many of the academic

staff do not have command of a foreign language or knowledge of how to use a computer, and are incapable of publishing advanced research papers in international scientific journals or of obtaining research or study grants. They also lamented the shortage of distinguished academic staff. Many academics mentioned that no attempts were made to improve their conditions, whether financially or regarding morale.

Coordination

One respondent mentioned that one of the most important problems was the complete lack of coordination between the academics, and between them and members of the university's administrative sector. Both academics and students were furthermore detached from the university and busy with their own work and with private courses.

5.4.4. Ethics and Values

When respect, trust and understanding between students and academics are examined, we find that more than 38% of undergraduate students and 39% of postgraduate students think that university students are not treated with respect inside the university, while less than 8% of undergraduate students and 12% of postgraduate students think that academics are not treated with respect inside the university (see Q22 and Q21, Appendix 9.5 and 9.6 respectively).

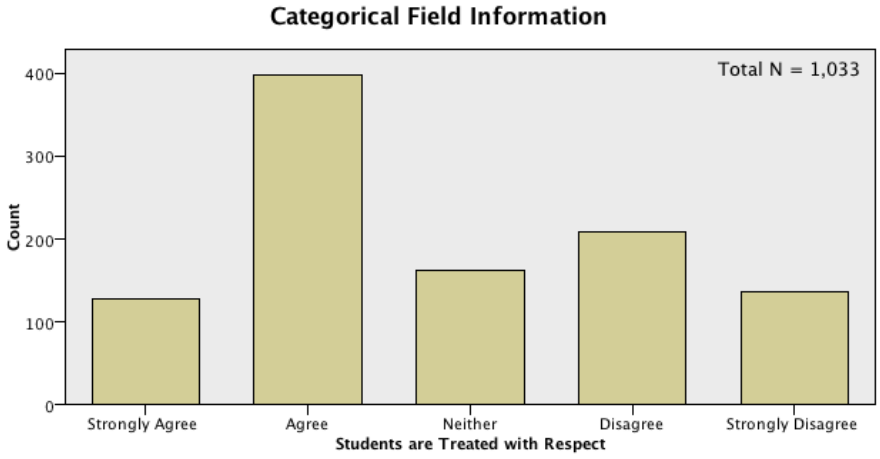

Figure 78: Students are Treated with Respect within the University

The table below (Table 62) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 62: Descriptive Statistics on Students are Treated with Respect

Students are Treated with Respect	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
ACA (Q16/8)	223	2	2.36 (0.91)	[2.24, 2.48]	413.64
PG (Q21/9)	233	3	2.96 (1.30)	[2.79, 3.13]	544.41
UG (Q22/9)	577	3	2.96 (1.31)	[2.85, 3.07]	545.88
Participants	1033	2	2.83 (1.25)	[2.75, 2.91]	

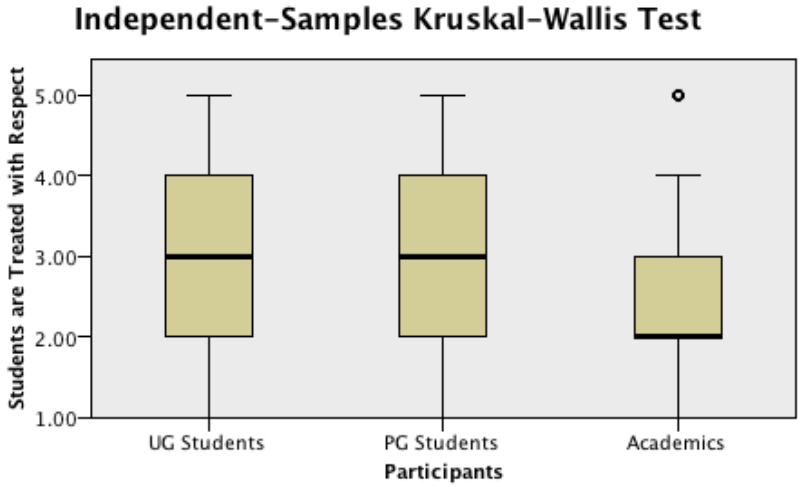

Figure 79: K-W Test (Students are Treated with Respect)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 36.85, p = .000$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant lower mean rank than PG and UG students, $X^2 = (2, N = 1033) = 4.86, p = .000$, $X^2 = (2, N = 1033) = 5.84, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.83 ± 0.08.

Table 63: Pairwise Comparisons of Participants (Students are Treated with Respect)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Academics-PG Students	130.767	26.903	4.861	.000	.000
Academics-UG Students	132.241	22.644	5.840	.000	.000
PG Students-UG Students	1.475	22.291	.066	.947	1.000

Over 73% of academics believe that students are treated with respect within the university against less than 46% of PG and 45% of UG students.

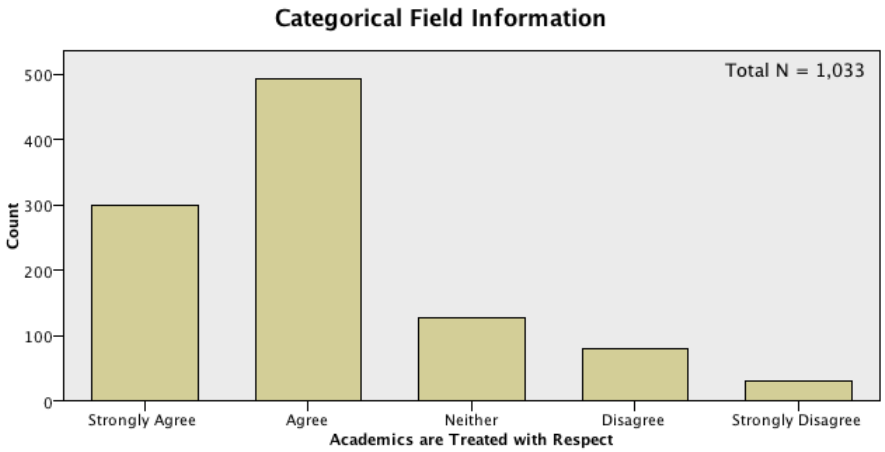

Figure 80: Academics are Treated with Respect

The table below (Table 64) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 64: Descriptive Statistics on Academics are Treated with Respect

Academics are Treated with Respect	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q22/10)	577	2	1.94 (0.94)	[1.86, 2.02]	475.78
PG (Q21/10)	233	2	2.05 (1.07)	[1.91, 2.19]	498.52
ACA (Q16/9)	223	2	2.48 (0.96)	[2.35, 2.61]	642.96
Participants	1033	2	2.08 (1.00)	[2.02, 2.14]	

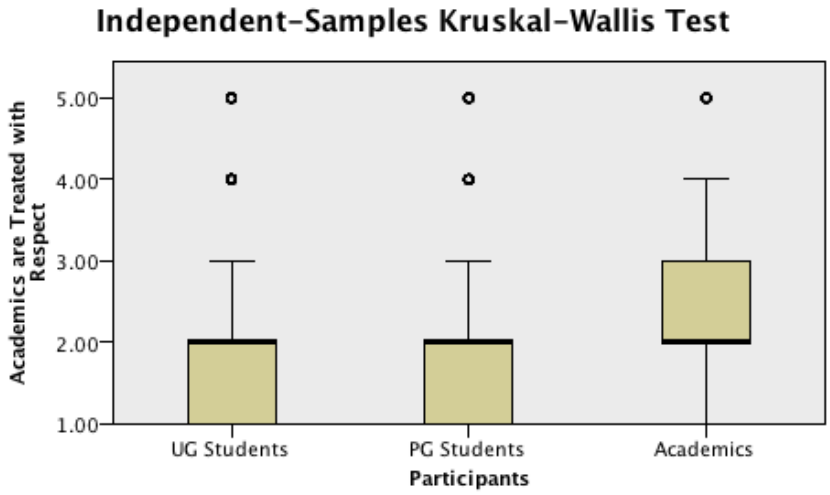

Figure 81: K-W Test (Academics are Treated with Respect)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 59.76, p = .000$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant higher mean rank than PG and UG students, $X^2 = (2, N = 1033) = -5.56, p = .000,\ X^2 = (2, N = 1033) = -7.64, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.08 ± 0.06.

Table 65: Pairwise Comparisons of Participants (Academics are Treated with Respect)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-PG Students	-22.745	21.530	-1.056	.291	.872
UG Students-Academics	-167.183	21.872	-7.644	.000	.000
PG Students-Academics	-144.438	25.985	-5.558	.000	.000

Less than 66% of academics believe that academic staff are treated with respect against more than 77% of PG and 80% of UG. It is worth noting that less than 19% of academics at universities and higher institutions believe that there are no mutual feelings of respect and trust between the academic staff and students, against over 60% who believe there are (see Q22, Appendix 9.7).

With regard to ethical and favouritism issues, students complained of the rigging of final grades in favour of the academic staff's children, relatives, or acquaintances so that they can be hired. They added that this is how they end up with incompetent academics. Some of the students also averred that

academics' children get top grades in oral examinations without even uttering a word.

Moreover, some students demanded that the remits and responsibilities of each university member should be clearly delineated and that the complaints procedures should be clarified so that students can know whom to turn to when they need something. They added that this would also help prevent incidents between students and academics. For example, some faculty members expelled students from lecture halls or lowered their grades over minor behaviour-related issues.

Some students also raised an issue about the lack of opportunities to express their opinions on the quality of teaching or the performance of academics, e.g. by means of feedback questionnaires. They also pointed out that there are no strict supervisory panels to prevent violations at universities. Lack of transparency and clear assessment and grading criteria were also mentioned. Furthermore, students stated the abuse of and discrimination against students, the lack of punctuality on the part of some of the academics, not to mention using students for their own private business. One of the students complained that students have no respect for the university. Students also criticized the haughty attitude of some academics who look down on them. A student stated that giving the academic staff training courses on teaching methods and how to deal with students is essential. There was a consensus among students that they are mistreated by academic staff who are not capable of understanding them.

Students feel unappreciated and disrespected and cited the lack of clear standards and fair disciplinary laws, which might be made public to all students and academic staff. They also called for monitoring and control of academics' powers and complained about the skewed treatment that children of the academic staff receive. According to the respondents, there are no control measures or monitoring of assessments.

Among postgraduate students, there was a common complaint about the deterioration in the academic staff's professionalism and ethics, especially since a number of them reached their positions through favouritism. One of the students complained, for example, that his Masters' dissertation discussion was

delayed by a whole year because he did not give his supervisor any gifts. The students also complained that the academics argued in front of the students, and grouped themselves into cliques that fought among each other. They added that these cliques only worked for their own interests when setting up the modules or supervising postgraduate students. They said that this practice harmed students' interests and their right to education and learning.

As for lectures, postgraduate students were almost unanimous in their complaint against the academic staff's disregard for punctuality or even for their lectures.

Postgraduate students further complained about being mistreated by the university administration staff in a manner which they considered unacceptable, given the educational level of the students. Most of the complaints were directed against the student affairs bodies. One of the students complained about the faculty staff's acrimonious fights in front of the students.

From a different perspective on the topic of ethics, respect, trust and understanding, the academics stressed the need to appreciate the value of knowledge and the need for mutual respect. They complained that students do not have enough appreciation for their studies and therefore 'waste' knowledge and information which might serve them later on. One of the respondents stated that "*society has lost its faith in the university and in the academic staff who are not given their due respect*".

In their responses, the academics also criticized the gap between academic staff and students. They blamed universities for not contributing to raising the students' levels of ethics. They also criticized the stagnancy of the university leaderships' mentality and their opposition to any new ideas presented by researchers. They further complained about the lack of any sense of responsibility on the part of the service providers, whether academic or administrative staff, and their disrespect for punctuality. They also complained that university administration staff mistreated students, whether undergraduate or postgraduate students, and even academics. They further criticized the lack of ethics, as well as the dereliction of duty and corruption among academic staff, and the unethical and unprofessional way that academic staff treated one another.

Academics also criticized cheating among students, low morals, sub-par intellects and language skills, and the absence of goals and motivation among students. They also stated that students were not ready for a new student-centred learning method.

The academics confirmed the pervasiveness of favouritism and the misconception that working in a university is a routine kind of work. They complained about the low scientific and ethical levels of academic staff at all ranks, as well as the students' reliance on private courses where the teachers gave them synopses of the curricula and answers to the tasks given to students.

The academics further criticised the inequality of opportunities availed to postgraduate and undergraduate students as a result of the bias in favour of the children of the academic staff. They also complained about the corruption, the numerous lawsuits against the universities, absence of transparency and objective criteria, and the incomplete independence of the universities. They criticized the work of the Supreme Council of Universities committees, as well as the lack of accountability, the inequality in pay that is not tied to performance and production, routine promotion, and the lack of punitive action in cases of scientific misconduct. They further criticized the lack of full-time dedication, the academics' greed when it comes to selling their books, lack of evaluation of job performance and the resulting preferential treatment, and lastly unethical behaviour among the academic staff.

One respondent complained about the private institutes' weak control over students and the poor quality examinations. The respondent also criticized the shocking lenience in test grades, which are adjusted in favour of the students, leading to a generation of graduates who are unable to face the outside world and are completely untrained for the job market.

This section has responded the first research question on how stakeholders (UG students, PG students and academics) perceive higher education in terms of student support, that includes resources and facilities, students' unions and welfare services, research, administration, and ethics and values.

5.5. Quality of Higher Education

PIF2 emphasised that the term 'Quality' is a wide term, which can be affected by the misallocation of resources and an inadequate distribution of resources in education, since the quality level of education is low and consequently the end product is inadequate and of no benefit to society. He considers that the number of graduates may be appropriate for the size of the population in Egypt, but the geographical distribution of the graduates may not be appropriate due to the shortage of universities and development plans in a considerable part of the country. PIF2 stressed, "*the quality of education is more important* (than the number of graduates)*, and that includes the teaching* (at university) *as well as the education previously attained*". One of the reasons he mentioned for the low quality of higher education is the educational level attained by students in previous stages.

However, the OFF1 believes that the quality of higher education in Egypt varies according to the components, and that quality varies even among academic subject areas. For example, engineering and medicine offer a higher quality of education than other faculties because the number of their students is relatively smaller. Furthermore, they rely more heavily on labs and experiments, so that the students learn more by practice than theory. Conversely, theoretical education teems with students to the point where their institutions cannot even apply for accreditation due to the massive number of students, far in excess of their stated capacity. As OFF1 succinctly put, "*our country is old, its infrastructure obsolete and there is an immense number of students*". This quote may encapsulate one of the main reasons justifying the need to frame substantial causes among others for reform.

On the same note, PIF1 believes that 'semi-education' is what best describes the current status of higher education in Egypt and is actually the worst of all worlds. "*Educating people costs money. If you don't have the financial means you will fail. If you do things by half measures you will not produce half-educated students, but may destroy the education system completely… because you've lowered the level of good education in order to give everyone half an education*".

PIF2 sees unemployment among university graduates as "*an outcome, not only*

of the low quality of higher education, but of an extremely inadequate economic policy". An example of an inadequate policy is allowing a large number of students to enrol in free higher education to study subjects which the job market does not need, such as at the Faculty of Law. He said, "*Economic growth is very slow and not appropriate for the education system. Unemployment is also a cause for the deteriorating morale among students and teachers. When a student joins the Faculty of Architecture for example, but doesn't know if he will graduate to be an architect or a taxi driver, this will invariably affect the education process*".

Over 56% of academics believe that the Ministry of Higher Education's quality assurance program has not contributed to developing higher education. Over 62% of the academics are generally discontent with the quality of higher education, but they do consider that there are possible ways to reform higher education without the need for large injections of cash.

SME2 (2013) believes that expanding enrolment whether with or without extra public funding is feasible, since other actors will establish their own offshore campuses and higher education institutions. Quality assurance frameworks and independent quality assurance agencies in charge should think of ways of guaranteeing expansion without lowering the quality of higher education.

OFF1 stated that the view prevails at Egyptian universities that quality assurance programmes are all about paperwork and documentation, and that the work is done simply by getting the accreditation. She said that there are attempts now to develop evaluation tools, revision methods and self-evaluation, in order to radically change the misconception that quality assurance is only a paper exercise.

OFF1 added that universities must meet the minimum quality standards, whether public or private universities. She stated that many private universities have not applied for accreditation. However she added that although they are dealing with many problems, private universities are able to overcome these because they have a solid infrastructure coupled with a small number of students and good funding.

5.5.1. Satisfaction

The students' overall responses about the quality of higher education and the quality of the services were very close, which points to a certain consensus among students on these issues. Less than 28% of undergraduate and less than 27% of postgraduate students expressed satisfaction with the quality of education, whereas less than of 16% of academics shared the same view.

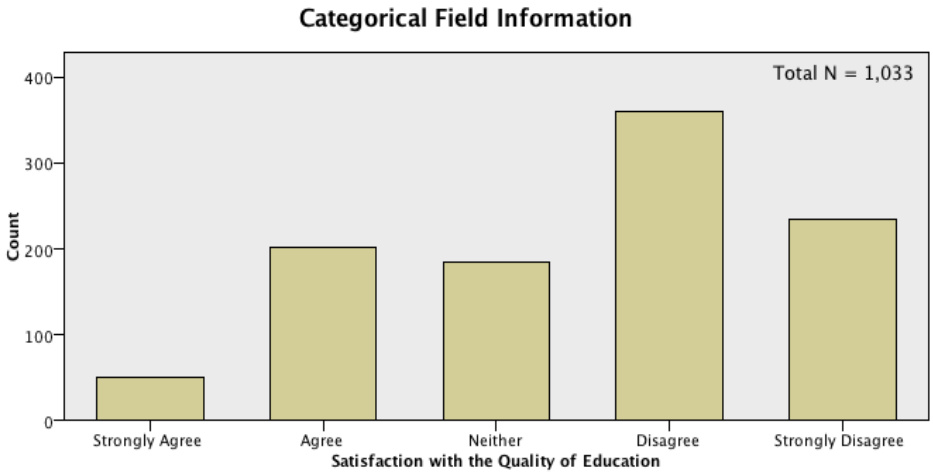

Figure 82: Satisfaction with the Quality of Education

The table below (Table 66) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 66: Descriptive Statistics on Satisfaction with the Quality of Education

Satisfaction with the Quality of Education	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q29/1)	577	4	3.47 (1.24)	[3.37, 3.57]	510.89
PG (Q27/1)	233	4	3.49 (1.22)	[3.33, 3.65]	515.85
ACA (Q22/8)	223	4	3.62 (0.96)	[3.49, 3.75]	534.01
Participants	1033	4	3.51 (1.18)	[3.44, 3.58]	

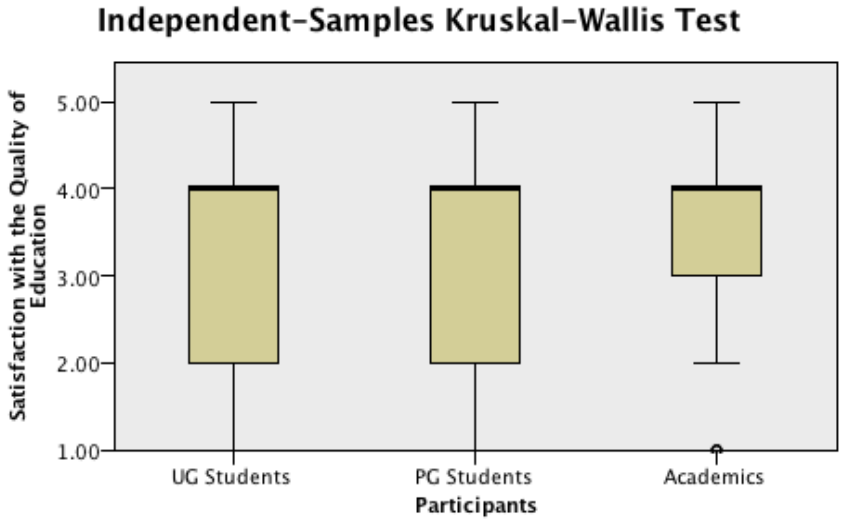

Figure 83: K-W Test (Satisfaction with the Quality of Education)

A Kruskal-Wallis H test revealed no significant differences between the UG, PG and Academics groups, $H(2) = 1.04, p = .594$. The total population mean is 3.51 ± 0.07.

In terms of the services provided by the universities and higher institutions, more than 53% and 58% of UG and PG students respectively expressed their dissatisfaction.

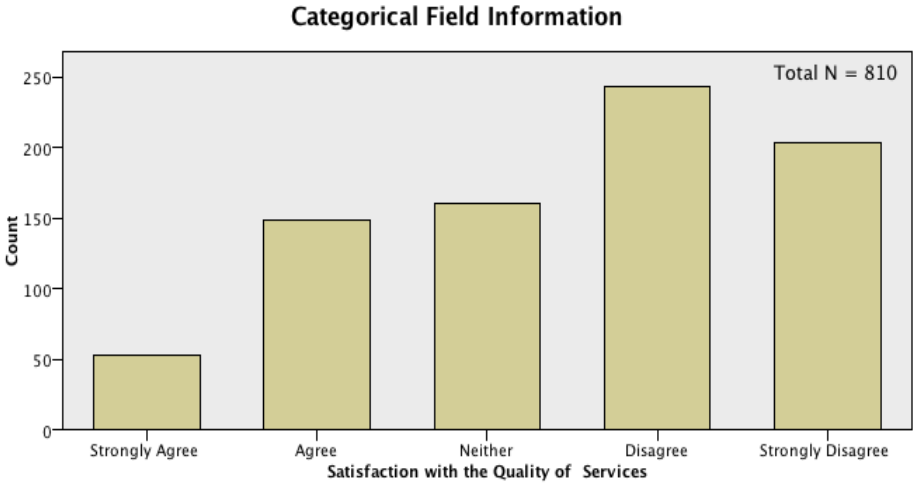

Figure 84: Satisfaction with the Quality of Services

The table below (Table 67) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 67: Descriptive Statistics on Satisfaction with the Quality of Services

Satisfaction with the Quality of Services	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
UG (Q29/2)	577	4	3.46 (1.25)	[3.36, 3.56]	400.82	231273.50
PG (Q27/2)	233	4	3.56 (1.17)	[3.41, 3.71]	417.09	97181.50
Participants	810	4	3.49 (1.23)	[3.40, 3.58]		

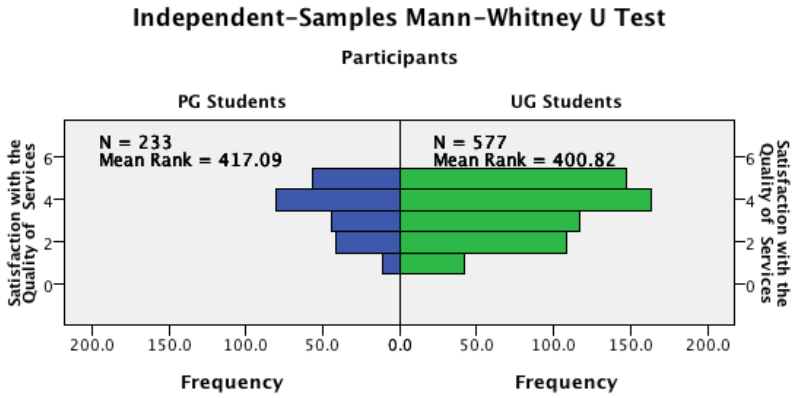

Figure 85: Mann-Whitney Test (Satisfaction with the Quality of Services)

A Mann-Whitney U test revealed no statistically significant difference between PG and UG groups, $U(808) = 64520.50, \mathrm{z} = -.92, p = .35$. The total population mean is 3.49 ± 0.09.

Table 68: Test Statistics (Satisfaction with the Quality of Services)

Mann-Whitney U	64520.50
Wilcoxon W	231273.50
Z	-.92
Asymptotic Sig. (2-tailed)	.35

There was a considerable discrepancy between the responses of the Bachelor and Licentiate students. Over 58% of Bachelor students expressed dissatisfaction with the quality of higher education, versus less than 46% of Licentiate students. As for the quality of the services provided by the universities and higher institutions, over 56% of Bachelor students expressed dissatisfaction, versus less than 44% of Licentiate students (see Q29, Appendix 9.5.2). This is not surprising, given that Bachelor students, who are in greater

need of labs and other resources, are more affected by the quality of education as well as the provided services than Licentiate students who do not require such special facilities.

It is worth mentioning that over 74% of undergraduate students (see Q29, Appendix 9.5.4) and over 70% of postgraduate students (see Q27, Appendix 9.6.2) who resort to private lessons are dissatisfied with the quality of higher education.

Dissatisfaction with the quality of education or services provided by the universities and higher institutions is reflected in a variety of issues that will be discussed in the relevant sections. However, it worth highlighting some issues in this section. Some of these issues may not be directly related to the quality of education, but nevertheless have a significant impact on the learning process and the perception of higher education among students and academics. For instance, the students mentioned the academic staff's misuse of power, narrow-mindedness, moral corruption, and mistreatment of and discrimination against students in a way that drives students to neglect their studies. Students also mentioned that lecturers mismanaged or did not have full command of the curricula, and that they were either incapable of or uninterested in delivering the information. They also complained that lecturers paid no heed to their own punctuality, did not commit to the schedule, and that they looked down on students and mistreated them.

One of the students said that he did not attend lectures as he was not able to understand the material from the lecturers. Another criticized the way the academic staff treated others unprofessionally like 'rivals'. One of the students complained about some teachers' incompetency and the large number of good students who have nevertheless been failed. One of the students called for limiting the powers of the academics over students and ensuring that test results should be the only judge of a student's knowledge and abilities. The students unanimously agreed on the need to supervise faculty members and university staff.

As for the level of treatment within the university campus, more than 73% of academics believe that students are treated with respect, and more than 65% of academics believe that academic staff are treated with respect. Less than 19%

of academics at universities and higher institutions believe that there are no mutual feelings of respect and trust between the academic staff and students, against over 60% who believe there are (see Section 5.4.4 'Ethics and Values').

Some students believed that academic staff are not selected on basis of their proficiency, and suggested reconsidering the selection criteria and providing academic staff with training courses on teaching methods and conduct with students. At the same time, a considerable portion of the academics averred incompetency among academic staff and the fact that they are unqualified to compete on a global level. They further criticized the low scientific and ethical standards of the academic staff and their assistants, and the inability of some of them to teach the curricula to the students in a clear manner. In terms of training courses, there was a consensus among academic staff that the courses provided for professional development are mostly a matter of formality for the sake of promotion. They also lamented the shortage of distinguished academic staff. Some of them also pointed out that many of the academic staff have no command of a foreign language or basic computer knowledge. They further complained that some of them are incapable of publishing a research paper in an international scientific journal or of obtaining research or study grants.

Many academics also talked about the lack of immunity, respect, or proper treatment of the academic staff members, which they believe their stature and nature of work should command. They further criticized the harsh living conditions of newly appointed academic staff due to the low wages they receive. They stated that many academics do work for other private universities and institutes, which negatively affects their performance at state-run universities. One of the respondents expressed the dissatisfaction of many academics with the low remuneration for academic staff, adding that despite the raise in the salaries of the academic staff following the 25th January Revolution, the salaries remain unsatisfactory as the raise was only applied to the basic salary.

Some of the academic respondents pointed to the instability of the academic staff members due to the many pressures facing them. They demanded dignified treatment so that they could carry out their jobs properly. Some of them expressed discontent with the humiliating working conditions, such as the

lack of adequate offices for academic staff, and the low income which is incommensurate with the cost of living. It should be noted that over 40% of academics believe that academic staff are paid well, and that their salaries have at least doubled since this questionnaire was conducted. It is worth asking of this is expected to have any impact on the quality of higher education.

Many academics talked about the lack of freedoms in universities and strategic planning for higher education, in addition to the marginalization of the role of academics in decision-making. One of the respondents described the academic staff as being dominated by elderly members with obsolete ideas and resistance to innovation, and stated that there is a gap in recruitment that resulted in an age and intellectual gap which is difficult to bridge in a short time.

There was an obvious frustration among the academics caused by isolation and lack of cohesion among the academic staff. Some respondents stated that there is no coordination between the administration and the academic members of staff. Furthermore, the academic staff members are detached from the university and students as they often have separate jobs (such as in clinics, consultation offices, and assignments), while the students, likewise, are detached from the university as they are busy receiving private tuition.

Among the issues that were cited by academics was the absence of resources and accountability, the lack of financial and human capital, and the large number of students. There were also calls to streamline the educational system to eliminate overlapping specializations in similar colleges.

All these issues contribute to an overall dissatisfaction and frustration among students and academics, in addition to corruption, including that of the universities' scientific committees in charge of promoting of academic staff. The respondents attributed the latter to a lack of transparency and objective criteria, and the committees' lack of independence. They also criticized the way the committees at the Supreme Council of the Universities are run.

Moreover, academics generally criticized the low capabilities and low aptitude of the students, lack of proper training for the academic staff, and poor language skills of both the academic staff and the students. They also complained about the unfavourable conditions of the academic staff, the

absence of professionalism, the low quality of the curricula, scarcity of resources, the detachment of the university from the industrial community, the poor subject expertise of the academic staff and their lack of command of the practical aspects.

On top of that, some academic respondents pointed out that the true mission of a university is not clear in the minds of academics, and that they are confused as to whether their job is to teach or to carry out scientific research. They felt that the status of university academic staff is more akin to that of school teachers than scientific researchers.

5.5.2. Merits to the Higher Education System

When asked about the positive aspects of the current higher education system, some undergraduate students praised the quality of education and the excellence of some academics. One of the comments received was that some academic staff have pinned great hopes on students and instilled in them invaluable principles.

Some undergraduate students spoke highly of student activities, volunteerism and some of the free courses provided. They also stated that their demands are satisfactorily met to some extent and praised the presence of younger academics who are well-versed with technology and well-prepared to deliver knowledge.

Some students found the university atmosphere appealing. A female student was grateful to the university for the opportunity to meet many new friends and to gain experience and knowledge in some subject areas.

An undergraduate student said that he gained enormous experience from student activities, whether scientific or social. Another student said that he learnt self-reliance, self-confidence and how to search for information anywhere. Another stated that the university produces students with high intellectual abilities as they have learnt to work under pressure and pass oral, practical and written exams. Some students also praised the presence of teamwork and the cooperation between some of the students and young academics, while another student praised some of the senior professors who have produced reference books and texts which complement the courses.

Postgraduate students lauded the transparency and equality in their treatment, and the cooperation between academic staff and employees. They were also thankful for the chance to acquire knowledge and experience in dealing with different ages, mind-sets and nationalities. They spoke favourably of some professors' ability to explain and get a point across – even if teaching was not quite up to the standards of university education – as well some academic staff's attempts to instil the principles of scientific research.

A student also praised the very enriching scientific discussions with certain intellectual professors and colleagues. Another praised the university's move toward quality assurance – even if not properly enforced – and the emerging awareness among academics of the need for reform in universities. They also commended the academic staff's high standards and the quality and efficiency of administrative staff at the university as well as the respectful treatment they receive.

Among the other positive aspects mentioned by postgraduate students are the important roles the academic staff and supervisors play in higher education. They noted that their guidance plays a major role in higher education and in teaching many skills and the needs of the job markets. One of the postgraduate students praised the library as well as the academic staff's attempt to deal affably with students. Another student praised the college administration's attempt to find solutions to the problems he faced in research. The last point mentioned under this aspect is the provision of work opportunities that match students' majors.

Among the positive aspects cited by the academics, the respondents mentioned the provision to students of information, knowledge and education. They added that field training for students develops their learning skills. The respondents also mentioned among the positive aspects the graduation of many cohorts of students with scientific degrees and certificate. They also mentioned taking an active part in current events and having hope for change. In other words, having a higher education system in place is seen as a great advantage, regardless of how efficient or otherwise the system is.

It is worth mentioning that over 58% of academics at universities and higher institutions have stated that there are merits to the current higher education

system (see Q23, Appendix 9.7).

The academics mentioned that students learn a good amount of knowledge along with vital practical experience, especially in many practical colleges. They also mentioned that students graduate with an acceptable amount of education and that many of the young researchers aspire to develop education and scientific research, supported by some of the senior and prominent researchers. Currently, universities and institutes give students basic knowledge to start self-development if they so want, and teach the students considerable amounts of information in their areas of specializations.

Among the other positive aspects, the academic respondents cited is the acceptable level of community participation. They also said that universities help instil the value of education in Egyptian society and help spread awareness. They added that universities help to some extent to produce decent scientific research and graduates with a decent level of scientific education.

On the positive aspects of subject areas, the respondents praised the variety of subject areas and the multitude of programs available, which mean that the higher education system is producing graduates who fill a wide spectrum of specializations. Indeed, there are merits to a higher education system that produces researchers whose value has been proven time and again whenever they are sent abroad on scholarships or scientific missions. Within the context of Egyptian universities, a respondent believes that the universities develop the students' minds and nurture their scientific thinking to a great extent. Other positive aspects cited were obtaining a higher education degree, increasing knowledge, and training the students in their areas of specialization and making them academically qualified.

Regardless of the quality of higher education, some respondents believe that the ability to accommodate a great number of students, the impartiality of the enrolment office, and the state-run education that is offered to all for free are great achievements. Indeed, the criteria for university enrolment are mostly fair, albeit incorrect.

Academics praised the quality of the production at many colleges despite the limited capabilities and the great number of students. They positively pointed

out the community services in the form of unique consultation units, applicable scientific research relevant to issues of the community, opportunities in higher education and research for of young people. Lastly, they praised the distinguished level of the top graduates at many of the science colleges who are subsequently offered grants by prestigious international universities to continue their postgraduate studies. This is a practical proof of the most positive aspect of higher education in Egypt despite all the problems and obstacles.

The academics stressed the concept of free education as it gives a great opportunity for students with limited incomes and serves all strata of society. This also avails the poor of a chance to obtain higher education and gives the more distinguished students opportunities for further development, e.g. through grants offered for studying abroad, despite their scarcity and tough requirements.

Some academics explained that, just because there are flaws, this does not somehow negate the whole institution; it only means that the institution is not able to function to the best of its ability. There is a higher education infrastructure that can be developed as well as an acceptable number of universities and cohorts of trained staff. Other academics praised the quality assurance programs and the availability of academic staff and their willingness to improve. The ability of some students and academics to access the e-library on the university's website has contributed to some extent to adding to the positive aspects about the current state of higher education.

Among the positive aspects that academics pointed out was the introduction of new skill sets and the appropriateness of the curricula of some practical colleges for the job market.

The respondents also stressed that the positive aspects of higher education have to do mainly with a few good academics who have vision, principles, and selflessness.

Some academics highlighted the fact that some attention is now being given to the competency of the academic staff, and control over them is being tightened to ensure they perform their duties. They also praised the quality-assurance system which increased faith in higher education, as well as the practical

scientific specializations, and added that these still have the ability to compete on a global level. They mentioned that some specializations have positive aspects, especially in colleges that have enforced the education quality project.

The academic respondents emphasised that there are decent scientific research papers and praised the perseverance of many researchers to finish their research despite the scarcity and the lack of resources. They described the level of scientific research as acceptable and praised the employment of a decent number of graduates at think tanks and national research institutes.

5.5.3. University fees

More than 71% of undergraduate and 74% of postgraduate students expressed willingness to pay higher fees for public universities in return for a better quality of education and services. More than 75% of undergraduate students who use private tutors expressed their willingness to pay higher fees for public universities. More than 79% of undergraduate private university students also expressed their willingness to pay higher fees for public universities if they were to study at a public university, against about 70% of public university students.

The academics were divided in their views with regard to paying higher fees for public universities; however, the percentage of those in favour of paying higher fees was slightly higher.

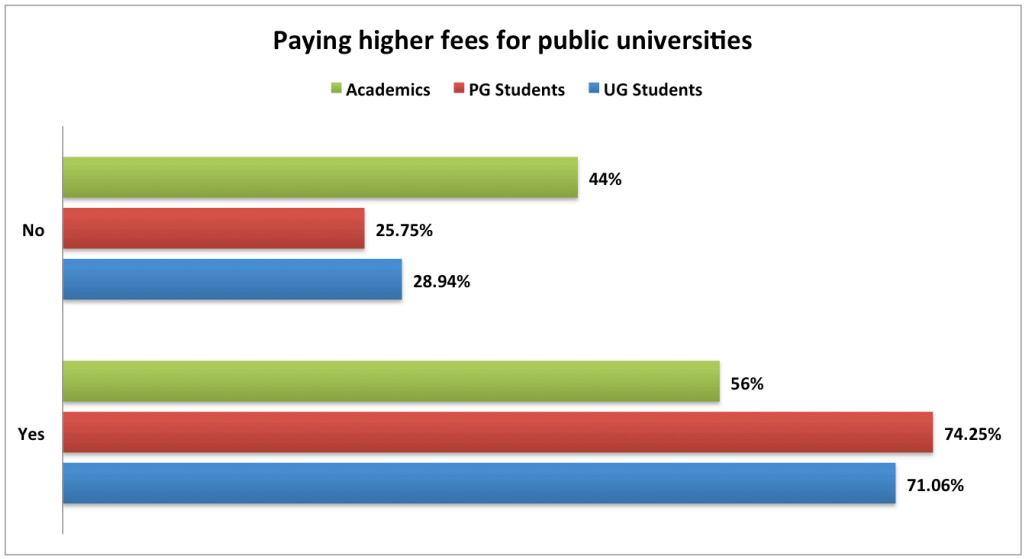

Figure 86: Paying Higher Fees for Public Universities

Expressing an official point of view, OFF1 stated that there is no intention to increase the education fees, but that paid college programs that cost less than

private universities might represent a quantum leap in the quality of universities. She stressed that scrapping subsidized education would be unacceptable on political and social levels. However she added that a rationalization of this subsidy may be considered, with the state for example choosing not to subsidize the education of a failing student. In our survey, one student of languages enrolled in a paid programme within a public university, complained that despite the high fees paid, there were still no suitable places available to attend lectures, which may cast doubts on the statement made by OFF1 (2014).

SME3 and SME4 stressed that in countries where governments bear the biggest financial responsibility for educational institutions, those governments find themselves in the situation where they cannot satisfy all the demand. However, social pressures are so big that alternative ways of meeting demand and financing education need to be found. Each country needs to decide what find the alternative ways that are viable in its particular case.

This section has responded the first research question on how stakeholders (UG students, PG students and academics) perceive higher education in terms of quality of higher education, that includes satisfaction, merits to the higher education system and university fees.

5.6. Role of Higher Education

Before tackling the issue of the role of higher education in Egypt, it should be noted that more than 64% of undergraduate and 58% of postgraduate students believe in the importance of higher education and its vital role in development against less than 23% of academics.

The table below (Table 69) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 69: Descriptive Statistics on Higher Education Serves a Vital Role in Development

Higher Education serves a vital role	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q22/9)	577	2	2.31 (1.34)	[2.20, 2.42]	458.75
PG (Q21/9)	233	2	2.48 (1.48)	[2.29, 2.67]	488.82
ACA (Q16/10)	223	3	3.38 (1.08)	[3.24, 3.52]	697.17
Participants	1033	2	2.58 (1.39)	[2.49, 2.67]	

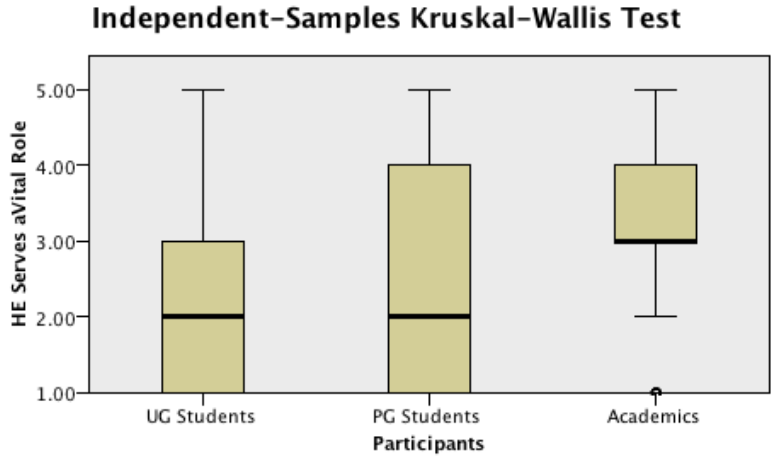

Figure 87: K-W Test (HE Serves a Vital Role in Development)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 111.16, p = .000$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant higher mean rank than PG and UG students, $X^2 = (2, N = 1033) = -7.66, p = .000,\ X^2 = (2, N = 1033) = -10.41, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.58 ± 0.09.

Table 70: Pairwise Comparisons of Participants (HE Serves a Vital Role in Development)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-PG Students	-30.066	22.550	-1.333	.182	.547
UG Students-Academics	-238.419	22.908	-10.408	.000	.000
PG Students-Academics	-208.353	27.216	-7.656	.000	.000

On the other hand, it should be noted that less than 18% of the Academics are satisfied with quality of education and believe that universities, whether public or private, offer quality education. Hence, more than 98% of them consider that higher education needs reform (see Q16/1, /3, /4, Q22/1, Appendix 9.7).

Among various choices, academics chose the three most important roles of the university, with a considerable margin from the rest. They are, in order: scientific research (84.03%), education (74.89%), and community service (69.96%).

It should be noted that over 53% of academics believe that qualifying students for the job market is one of the university's roles. This stands in contrast to the view frequently expressed by academics in the survey, namely; that the mission of the university is not to produce craftsmen but to nurture intellects and awareness, program minds, and build decent, creative, and giving personalities. On the research role of universities, the academics also criticized the lack of development of scientific research. The respondents pointed out the need for training scientific researchers who will be capable of carrying out scientific research according to international standards, to contribute toward improving the quality of research output. In terms of research, SME1 at OECD defined the university role as the place where some of the basic research is conducted in a class or a laboratory. In many countries, around 10 per cent of PhD holders are based at universities where they are expected to conduct research in addition to teaching and as well as engaging in consultancy work to raise their income (SME1 at OECD). So actuating the research role of the university will require more researchers and strategic research plans in a wider national context.

The academics criticized what they regarded as detachment of the universities from the problems of society, and the fact that universities' potential to solve the real problems of the country was not being exploited. They further criticized the absence of a vision and mentality that would be beneficial to the community, academics and students.

The role of higher education can be extended to that of stimulating the reform of pre-university education. However, there is pressure on governments to deal with the issue of employability, which led to a rethink of the purpose and role of universities, rather than actuating the role of other education sectors such as technical, professional or vocational education (SME1). On that matter, SME3

(2013) believes that the role of higher education is the formation of the leaders, thinkers, innovators and entrepreneurs of the country.

PIF2 asserts that higher education needs to be adequate, fair and harmonious. National goals should inform the goals of education, so that their transfer to higher education is seamless and can be achieved by improving the quality of education, improving the allocation of financial resources, guaranteeing jobs for graduates, and abolishing the duality in the nation's higher education.

SEM3 believes that higher education institutions, and universities in particular, are the places where freedom of speech, democracy, critical thinking, citizenship and all other values linked to society are nurtured. On this issue, over 81% of academics believe that freedom and democracy are essential prerequisites for higher education reform (see Q22/8, Appendix 9.7).

5.6.1. Student Demand

Academics were harshly critical of the huge number of students admitted to universities, which is four times the capacity, and also of the way in which students are placed in universities through the Coordination Office on the basis solely of their high school grades without sitting aptitude tests which might assess their knowledge and abilities. The high school grades determine both the university and the subject a student is entitled to study. Thus, more often than not, students enrol in a university or in a subject that they do not wish to study, for the mere sake of a university degree.

Over 59% of the students stated that they could not study the academic programme they originally wanted for one reason or another.

When examining the current studies of the students compared to their original preference, we find that about 60% of the original preferences fall within the same academic field (Sciences, Engineering, Arts, Humanities, Social Sciences) but with a different major, while the other 40% fall outside the fields of their current academic studies. It seems from the table below that sciences students are less satisfied with their field of study, whereas arts and humanities students are more satisfied. However, the student demand for sciences and engineering is much higher than that for social sciences and art and humanities.

Table 71: The Current Specialisation Versus the Initially Preferred (UG)

Initially Preferred	Current Specialisation				
	Sciences	**Engineering**	**Social Sciences**	**Arts/Humanities**	Total
Sciences	26.90%	1.38%	6.90%	0.69%	**35.87%**
Engineering	8.28%	16.55%	8.97%	2.07%	**35.87%**
Social Sciences	2.07%	0.69%	9.66%	2.76%	**15.18%**
Arts/Humanities	0.69%	0.69%	4.83%	6.90%	**13.11%**
Total	**37.94%**	**19.31%**	**30.36%**	**12.42%**	100%

SME3 at UNESCO (2013) stated that the demand for enrolment in and access to higher education is growing and expanding all over the world. More people are graduating from the secondary system in Arab countries as a result of this expansion, but also for demographic reasons, as the Arab countries have a very young population.

Understanding the student demand for higher education requires identifying the students' motivations for pursuing undergraduate and postgraduate studies. The top motives, both public and private, and science and literary majors, include: boosting job prospects, gaining knowledge and skills, enhancing one's social image, and social networking. The female students' top reason was gaining knowledge and skills, followed by boosting job prospects.

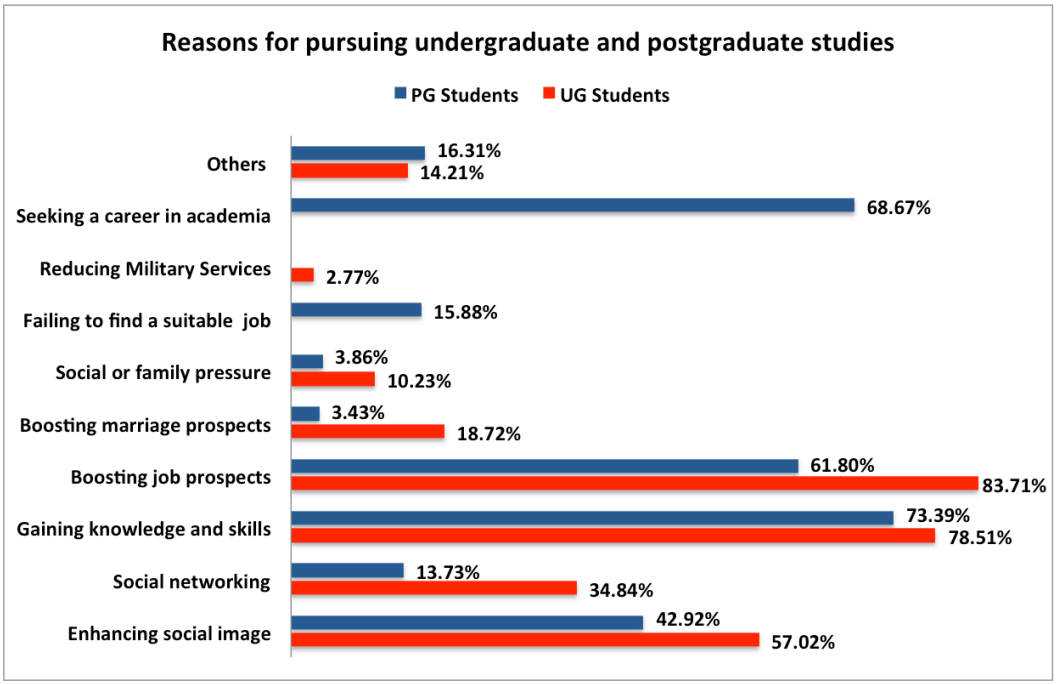

Figure 88: Reasons for Pursuing Undergraduate and Postgraduate Studies

A considerable portion of UG students mentioned their desire to expand their knowledge in their field of study. Among the other motivations are self-fulfilment, learning useful things in life, making parents proud, achieving a dream or an ambition in life, increasing knowledge acquisition and social experiences, and completing a path of excellence as well as self-respect and developing their community. Some UG students mentioned among their motivations either not knowing what they want to achieve in life, fear of being labelled as failures, lack of alternatives, or just to get a university degree.

Some UG students mentioned religious motivations, primarily the fact that seeking knowledge is ordained by Allah. They also cited their desire to elevate the state of Islam, and serve their country and religion. One female student said that she wanted to prove to the West that Muslim women can excel in everything, contrary to what is claimed. Finally, one student said that knowledge and information give us the power that we need to build on earth.

One UG student mentioned his desire to be a successful teacher who helps serve and rebuild his country. Another mentioned contributing to solving Egypt's endemic problems, helping the country to prosperity, and inventing something that would contribute to Egypt's development. Many other UG students expressed their desire to serve and develop the country, enhance the community and not be a burden.

For postgraduate students the reasons for studying were: gaining knowledge and skills, pursuing a career in academia, boosting job prospects, and enhancing their social image. The order of reasons differed based on the degree sought. Boosting job prospects was the top reason cited by Higher Diploma students, while gaining knowledge and skills was the top reason among Masters' students, and seeking a career in academia was the top reason among PhD students.

Among the other reasons cited by the PG students for pursuing higher education was getting a higher salary. When asked about work requirements, the respondents mentioned that their employers require a higher degree certificate, or that it is necessary for their promotion or to improve their position at work. They also mentioned gaining higher qualifications in their work field.

Postgraduate respondents talked about their wish to serve scientific research and loving their specialisations. They also talked about their wish to expand their culture and develop leadership skills that can be relied upon. One student said that scientific research had been their childhood dream and ambition and that they had wanted to contribute toward scientific development and add more to their field of specialisation. The respondents also talked about their love of scientific matters and their conviction that the more they learned the more they could benefit society. One student said their reason was to fulfil a lifelong ambition, while another stated that continuing learning is their hobby.

Other motivations cited by the PG respondents for pursuing higher education were: increasing their self-esteem, gaining more qualifications, working to correct falsehoods that were made about the history of Muslims, and fighting favouritism in recruitment, as vacant positions usually end up being given to the faculty staff's children. Also cited were the benefits of a higher degree when starting a new business, and receiving better treatment in general.

Postgraduate respondents also mentioned that one of the reasons that motivated them to pursue higher education was to serve the country and to work on contributing toward scientific research advancement in Egypt.

Among the religious motivations that were mentioned were the Qur'anic verse: "And say: My Lord! Increase me in knowledge" (Taha; 114) and the hadiths: "Seeking knowledge is mandatory on every Muslim, male and female," and "The best among you is the one who learns the Qur'an and teaches it".

SME2 at OECD believes that it is important to acknowledge the massification of higher education as a global trend, which OECD is a great supporter of. She explained that where fewer than 10 to 12 percent of people who pass secondary education enter into higher education, a considerable number of those who have not entered are likely to be willing to enter higher education to improve their lives. This fact creates a need to expand the higher education sector which will result in pressure on governments. However, she added that there is also a wide range of modalities to respond to this demand, such as technologies which can provide access to higher education in alternative ways. There is also the expansion in the private provision of higher education which is one of the fastest growing sectors of higher education.

SME1 at OECD stated that "*In many of the developing countries, people think or hope – families' hope - that having higher education degree is a guarantee for success later in life*".

5.6.2. Job Prospects

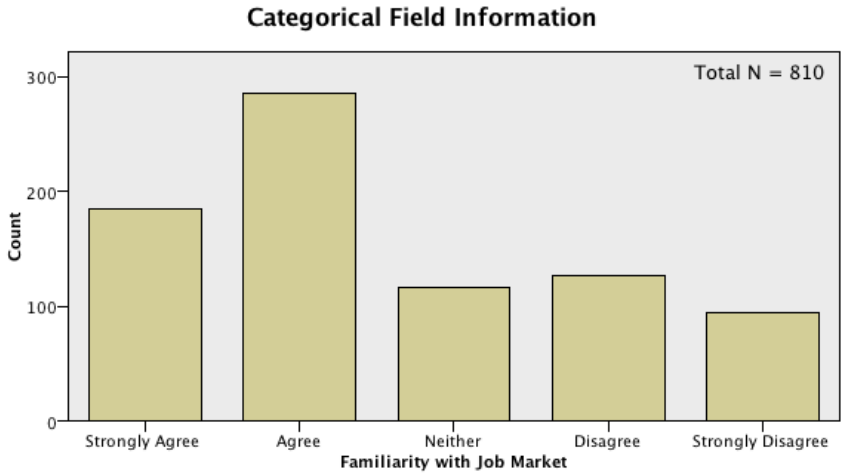

Figure 89: Familiarity with the Job Market

The table below (Table 72) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 72: Descriptive Statistics on the Familiarity with Job Market

I am Familiar with Job Market	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
PG (Q20/1)	233	2	2.40 (1.26)	[2.24, 2.56]	373.94	87127
UG (Q21/1)	577	2	2.66 (1.32)	[2.55, 2.77]	418.25	241328
Participants	810	2	2.58 (1.31)	[2.49, 2.67]		

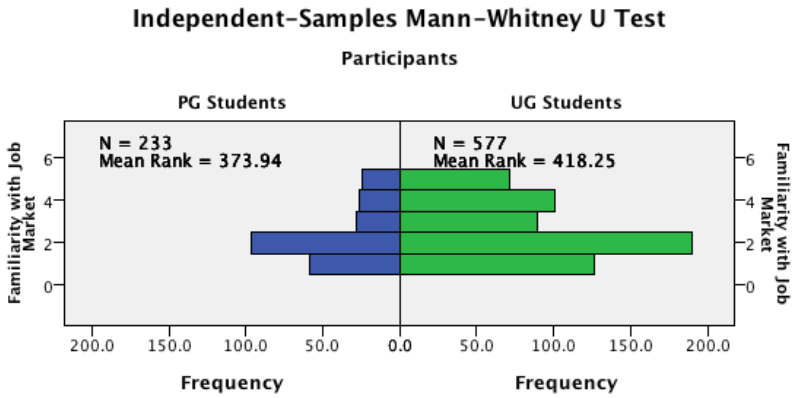

Figure 90: Mann-Whitney Test (Familiarity with Job Market)

A Mann-Whitney U test showed a statistically significant difference between UG and PG students, $U(808) = 59866, \mathrm{z} = -2.52, p = .01$. The total population mean is 2.58 ± 0.09.

Table 73: Test Statistics (Familiarity with Job Market)

Mann-Whitney U	59866
Wilcoxon W	87127
Z	-2.52
Asymptotic Sig. (2-tailed)	.01

Over 54% of undergraduate and 66% of postgraduate students believe they know the requirements of the job market, while over 89% of undergraduate students (see Q21, Appendix 9.5) and over 86% of postgraduate students (see Q20, Appendix 9.6) believe that English proficiency increases job prospects as a basic requirement.

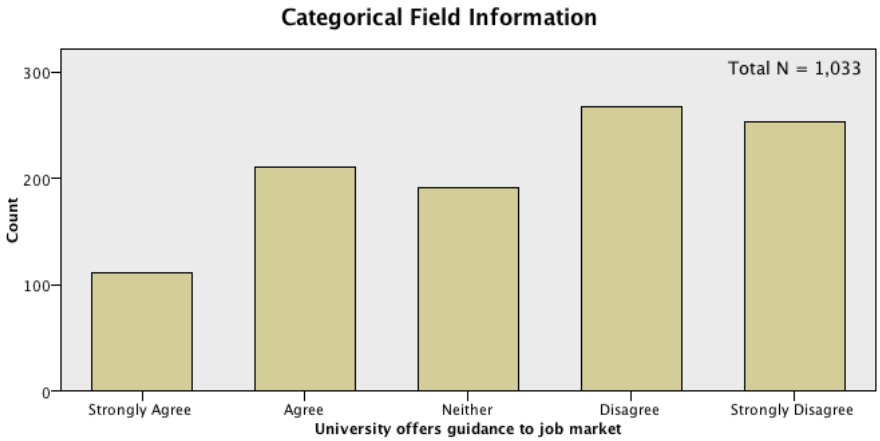

Figure 91: University Offers Guidance to Job Market

The table below (Table 74) shows the descriptive statistics with confidence

intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 74: Descriptive Statistics on University Offers Guidance to Job Market

The university offers guidance to job market	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q21/4)	577	3	3.25 (1.41)	[3.14, 3.36]	502.22
ACA (Q15/3)	223	4	3.43 (1.10)	[3.28, 3.58]	529.91
PG (Q20/4)	233	4	3.44 (1.32)	[3.27, 3.61]	541.24
Participants	1033	4	3.33 (1.33)	[3.25, 3.41]	

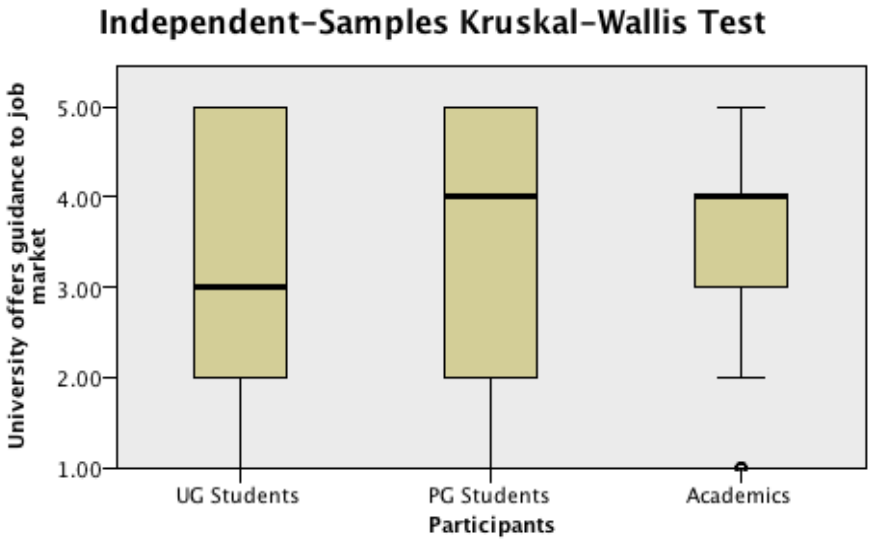

Figure 92: K-W Test (University Offers Guidance to Job Market)

A Kruskal-Wallis H test revealed no significant differences between the UG, PG and Academics groups, $H(2) = 3.54, p = .170$. The total population mean is 3.33 ± 0.08.

Over 49%, 51% and 51% of UG students, PG students and academics respectively believe that the university provides no guidance or advice that can help them compete in the job market.

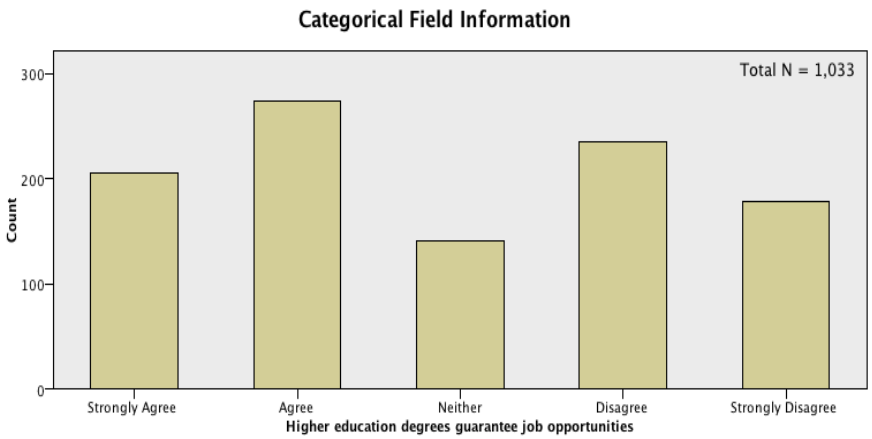

Figure 93: HE Degrees Guarantee Job Opportunities

The table below (Table 75) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 75: Descriptive Statistics on HE Degrees Guarantee Job Opportunities

Higher education degrees guarantee job opportunities	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q21/2)	577	3	2.85 (1.44)	[2.73, 2.97]	503.89
PG (Q20/2)	233	2	2.85 (1.48)	[2.66, 3.04]	502.79
ACA (Q15/2)	223	3	3.13 (1.18)	[2.97, 3.29]	565.76
Participants	1033	3	2.91 (1.40)	[2.82, 3.00]	

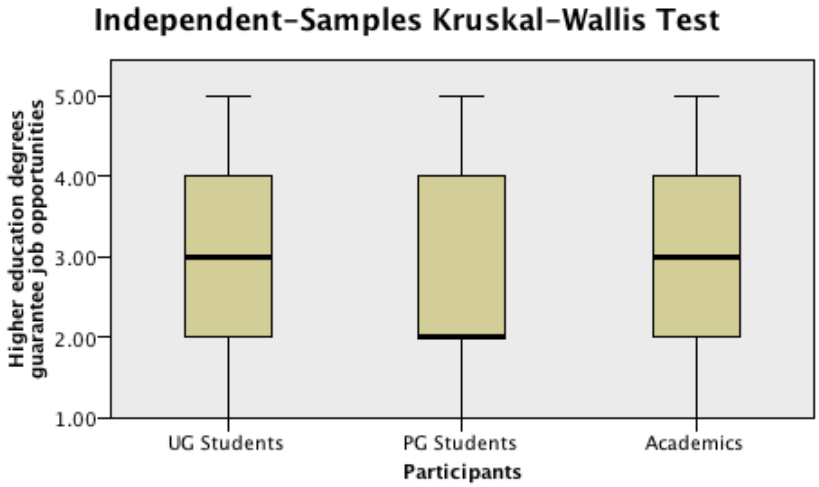

Figure 94: K-W Test (HE Degrees Guarantee Job Opportunities)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 7.97, p = .019$. A Chi-square multiple comparisons test revealed that the academics scored a statistically significant higher mean rank than UG students, $X^2 = (2, N = 1033) = -2.69, p = .021$. However, the PG students did not differ significantly from UG students or Academics. The total population mean is 2.91 ± 0.09.

Table 76: Pairwise Comparisons of Participants (HE Degrees Guarantee Job Opportunities)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
PG Students-UG Students	1.103	22.620	.049	.961	1.000
PG Students-Academics	-62.973	27.300	-2.307	.021	.063
UG Students-Academics	-61.870	22.978	-2.693	.007	.021

More than 48% of undergraduate students and more than 51% of postgraduate students think that university degrees guarantee job opportunities against less than 37% of academics. It is worth noting that a considerable percentage of academics (over 44%) believe that a university degree may not guarantee a job opportunity. This is consistent with over 46% of academics believing that the curricula do not meet the needs of the job market (see Q15/1, Appendix 9.7).

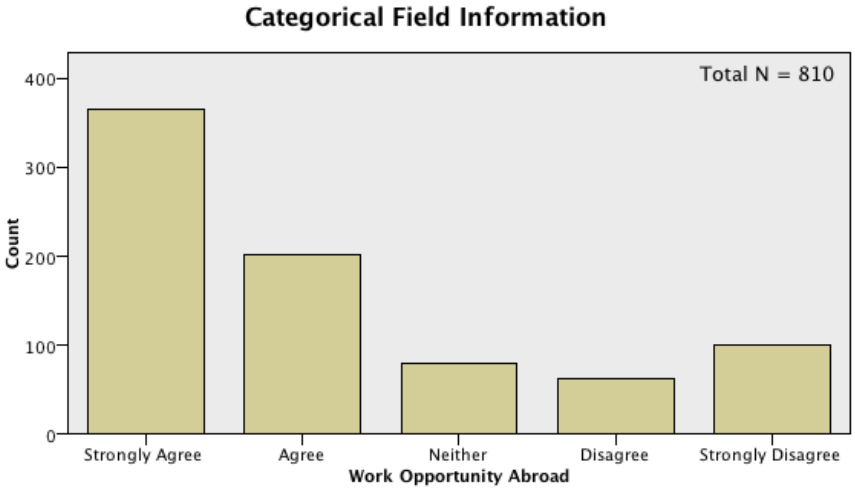

Figure 95: Work Opportunity Abroad

The table below (Table 77) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 77: Descriptive Statistics on Work Opportunity Abroad

Work Opportunity Abroad	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
UG (Q21/5)	577	2	2.14 (1.37)	[2.03, 2.25]	401.51	231672.50
PG (Q20/5)	233	2	2.24 (1.45)	[2.05, 2.43]	415.38	96782.50
Participants	810	2	2.17 (1.40)	[2.07, 2.27]		

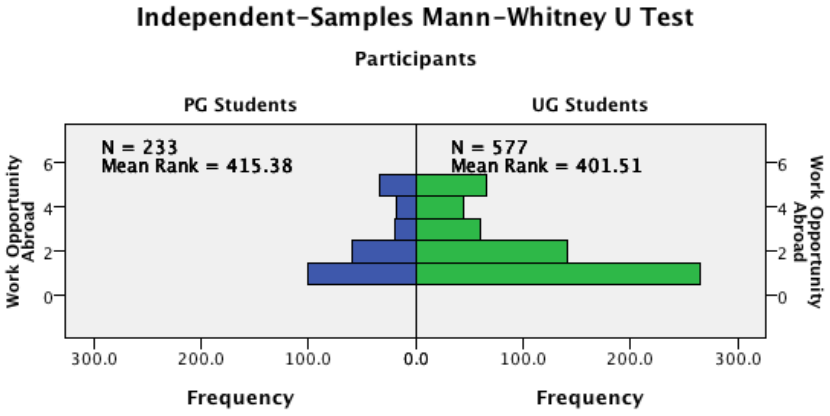

Figure 96: Mann-Whitney Test (Work Opportunity Abroad)

A Mann-Whitney U test revealed no statistically significant difference between PG and UG groups, $U(808) = 64919.50, \mathrm{z} = -.81, p = .41$. The total population mean is 2.17 ± 0.10.

Table 78: Test Statistics (Work Opportunity Abroad)

Mann-Whitney U	64919.50
Wilcoxon W	231672.50
Z	-.81
Asymptotic Sig. (2-tailed)	.41

More than 69% of PG and 70% UG students are looking for a job opportunity abroad.

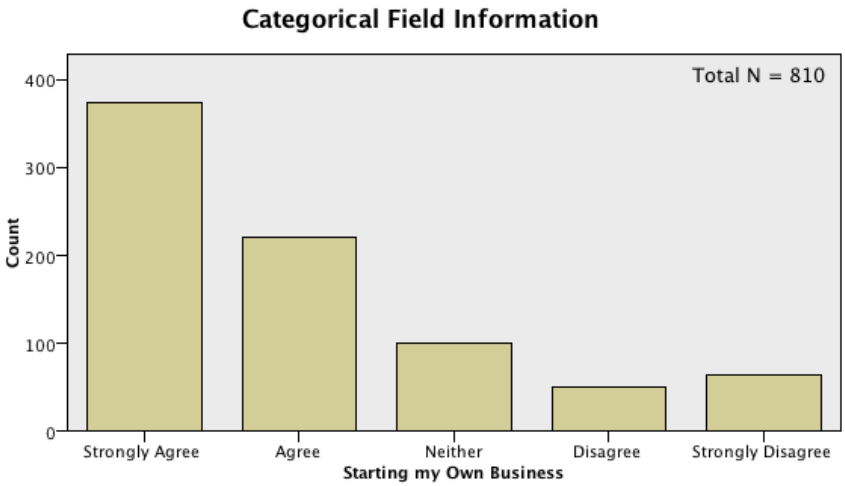

Figure 97: Starting my Own Business

The table below (Table 79) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 79: Descriptive Statistics on Starting my Own Business

Starting my Own Business	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
UG (Q21/8)	577	2	2.00 (1.22)	[1.90, 2.10]	402.01	231957.50
PG (Q20/8)	233	2	2.11 (1.32)	[1.94, 2.28]	414.15	96497.50
Participants	810	2	2.03 (1.25)	[1.94, 2.12]		

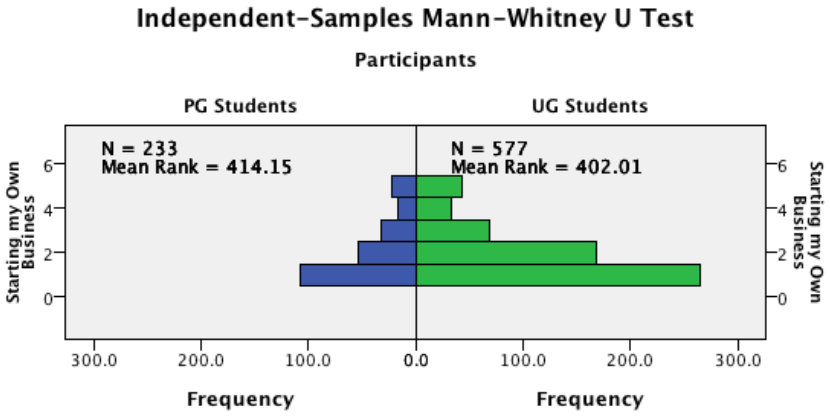

Figure 98: Mann-Whitney Test (Starting my own business)

A Mann-Whitney U test revealed no statistically significant difference between PG and UG groups, $U(808) = 65204.50, \mathrm{z} = -.71, p = .47$. The total population mean is 2.03 ± 0.09.

Table 80: Test Statistics (Starting my own business)

Mann-Whitney U	65204.50
Wilcoxon W	231957.50
Z	-.71
Asymptotic Sig. (2-tailed)	.47

Over 69% of postgraduate and 75% of undergraduate students want to establish their own business.

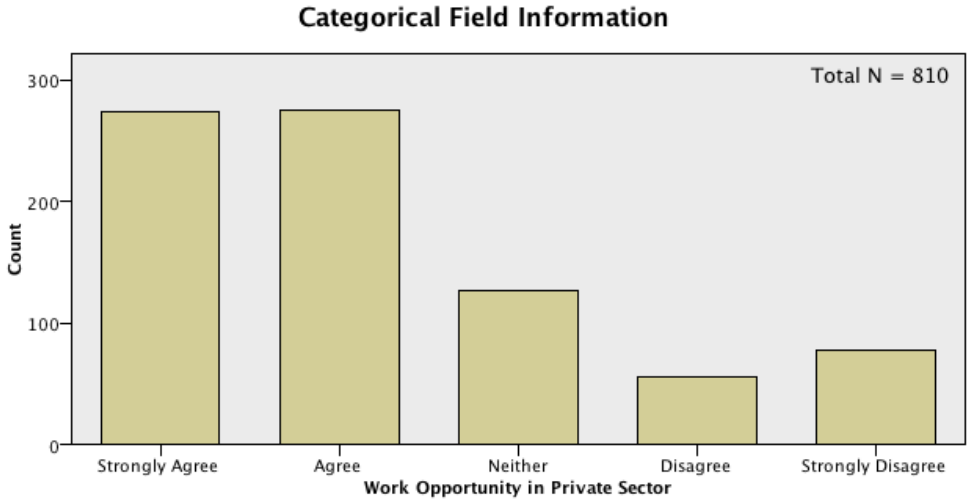

Figure 99: Work Opportunity in Private Sector

The table below (Table 81) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 81: Descriptive Statistics on Work Opportunity in Private Sector

Work Opportunity in Private Sector	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
UG (Q21/6)	577	2	2.08 (1.16)	[1.99, 2.17]	378.92	218636
PG (Q20/6)	233	2	2.64 (1.39)	[2.46, 2.82]	471.33	109819
Participants	810	2	2.25 (1.26)	[2.16, 2.34]		

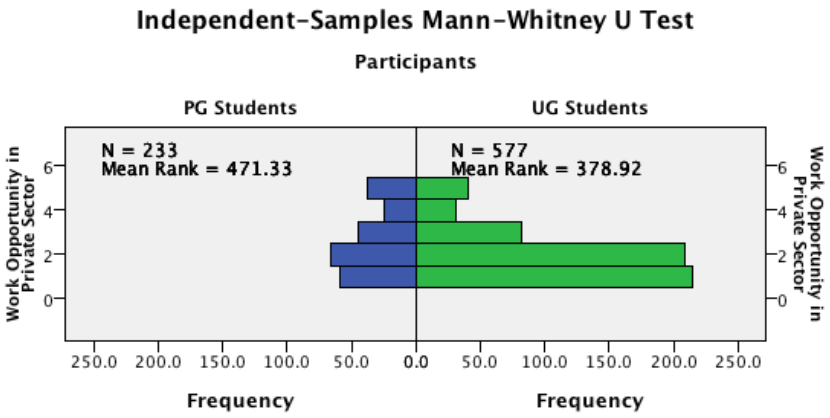

Figure 100: Mann-Whitney Test (Work opportunity in private sector)

A Mann-Whitney U test showed a statistically significant difference between UG students and academics groups, $U(808) = 51883, \mathrm{z} = -5.31, p = .00$. The total population mean is 2.25 ± 0.09.

Table 82: Test Statistics (Work opportunity in private sector)

Mann-Whitney U	51883
Wilcoxon W	218636
Z	-5.31
Asymptotic Sig. (2-tailed)	.00

Over 73% of undergraduate students are looking for a job opportunity in the private sector against less than 54% of postgraduate students.

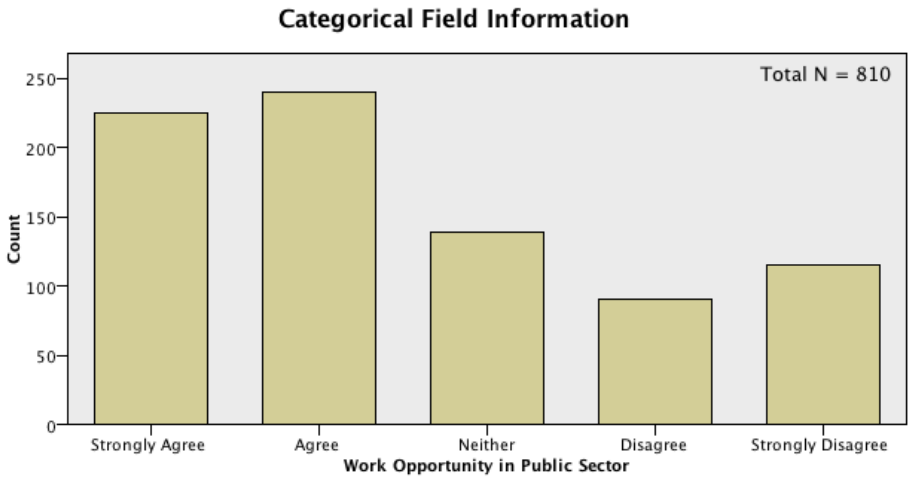

Figure 101: Work Opportunity in Public Sector

The table below (Table 83) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 83: Descriptive Statistics on Work Opportunity in Public Sector

Work Opportunity in Public Sector	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
PG (Q20/7)	233	2	2.40 (1.39)	[2.22, 2.58]	377.81	88030.50
UG (Q21/7)	577	2	2.60 (1.36)	[2.49, 2.71]	416.68	240424.50
Participants	810	2	2.54 (1.37)	[2.45, 2.63]		

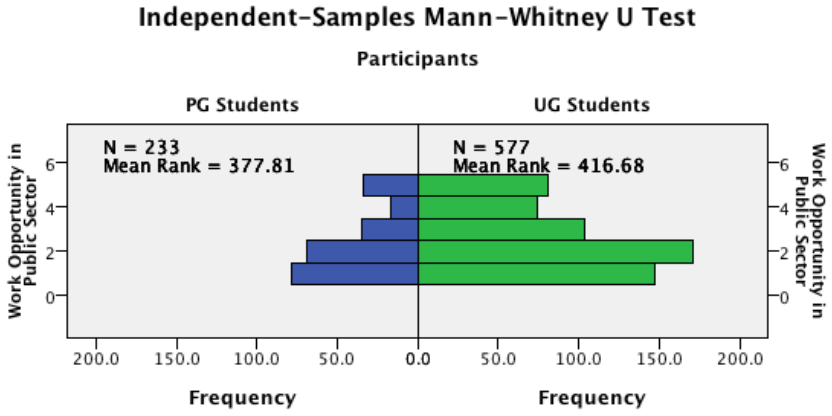

Figure 102: Mann-Whitney Test (Work Opportunity in Public Sector)

A Mann-Whitney U test showed a statistically significant difference between UG students and academics groups, $U(808) = 60769.50, \mathrm{z} = -2.20, p = .02$. The total population mean is 2.54 ± 0.09.

Table 84: Test Statistics (Work Opportunity in Public Sector)

Mann-Whitney U	60769.50
Wilcoxon W	88030.50
Z	-2.20
Asymptotic Sig. (2-tailed)	.02

Over 55% of undergraduate and 63% of postgraduate students are looking for job opportunities in the public sector.

It is noted that more than 73% of Bachelor students are looking for a job opportunity abroad, versus less than 59% of Licentiate students. Also, more than 78% of Bachelor students are looking to start a private business, versus less than 64% of Licentiate students and over 70% of Licentiate students are looking for a job in the public sector, versus less than 51% of Bachelor students

(see Q21, Appendix 9.5.2).

When comparing male and female students, we find that more than 78% of male students are looking for a job opportunity abroad, versus less than 61% of female students. Also, with a slight difference over 77% of male students are looking to start their own business, versus less than 72% of female students (see Q21, Appendix 9.5.3).

In terms of career plan and competing in the job market, less than 36% of undergraduate students and 41% of postgraduate students believe they are capable of competing in the job market after graduation. Yet, more than 66% of undergraduate students and 73% of postgraduate students have specific plans for their future careers. It is worth mentioning that less than 16% of academics believe that the acquired knowledge and skills by student would allow them to compete in job market (see Q16, Appendix 9.7).

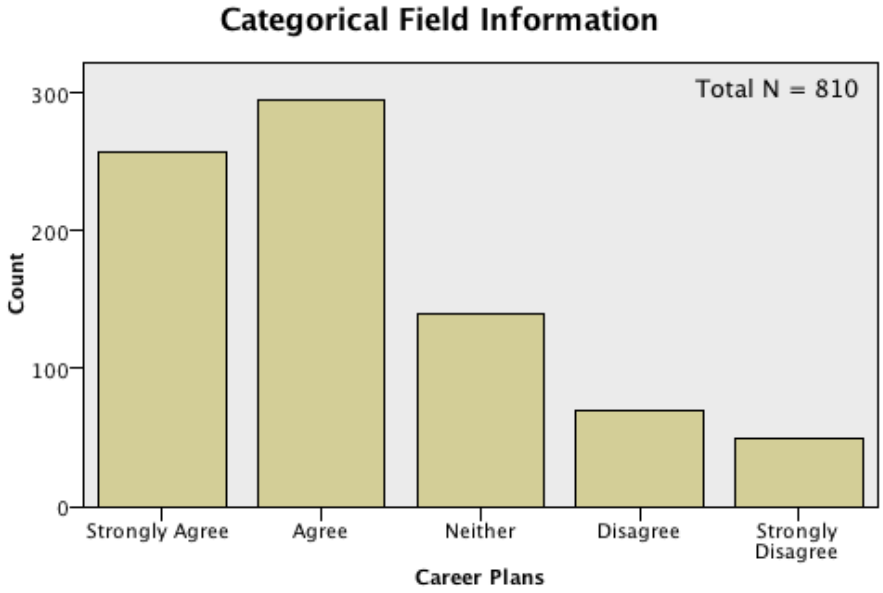

Figure 103: Career Plans

The table below (Table 85) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 85: Descriptive Statistics on Career Plans

I have Career Plans	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank	Sum of Ranks
PG (Q21/3)	233	2	2.11 (1.15)	[1.96, 2.26]	414.73	239299.50
UG (Q22/3)	577	2	2.25 (1.16)	[2.16, 2.34]	382.64	89155.50
Participants	810	2	2.21 (1.16)	[2.13, 2.29]		

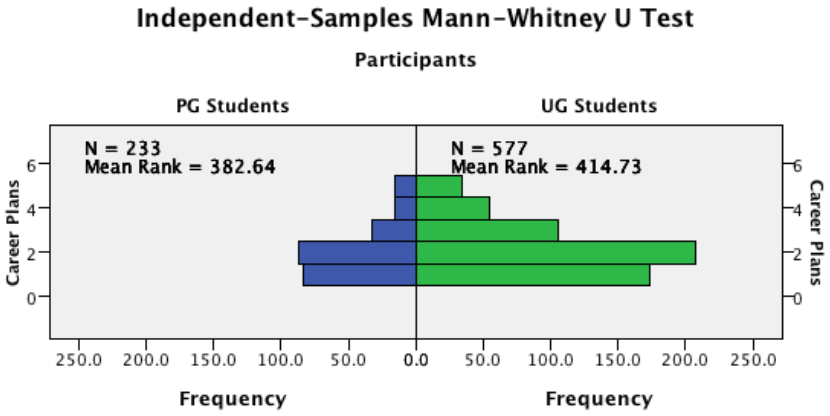

Figure 104: Mann-Whitney Test (Career Plans)

A Mann-Whitney U test revealed no statistically significant difference between PG and UG groups, $U(808) = 61894.50, \mathrm{z} = -1.84, p = .06$. The total population mean is 2.21 ± 0.08.

Table 86: Test Statistics (Career Plans)

Mann-Whitney U	61894.50
Wilcoxon W	89155.50
Z	-1.84
Asymptotic Sig. (2-tailed)	.06

Over 66% of undergraduate and 73% of postgraduate students have specific plans for their future careers.

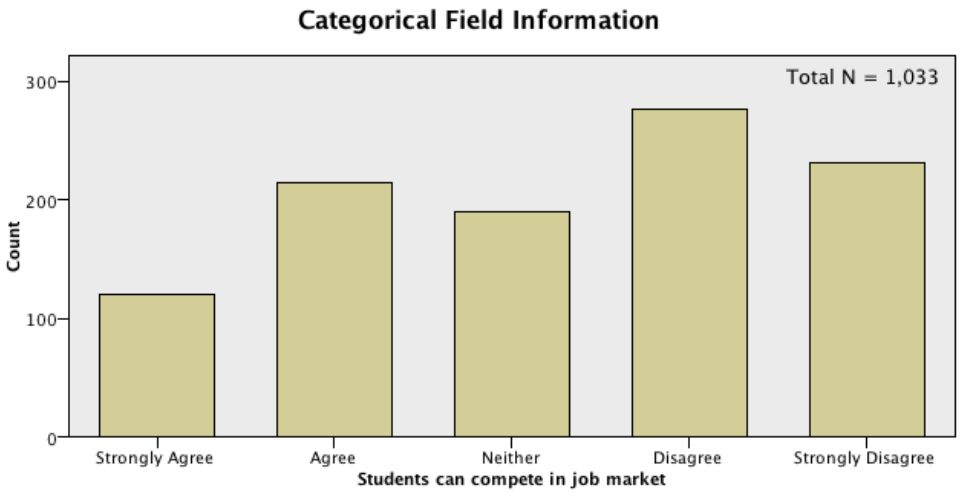

Figure 105: Competing in Job Market

The table below (Table 87) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 87: Descriptive Statistics on After Graduation Students can Compete in Job Market

After Graduation Students can Compete in Job Market	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q22/2)	577	3	3.18 (1.35)	[3.07, 3.29]	497.21
PG (Q21/2)	233	3	3.24 (1.27)	[3.08, 3.40]	496.65
ACA (Q16/2)	223	4	3.64 (1.01)	[3.51, 3.77]	589.47
Participants	1033	3	3.27 (1.33)	[3.19, 3.35]	

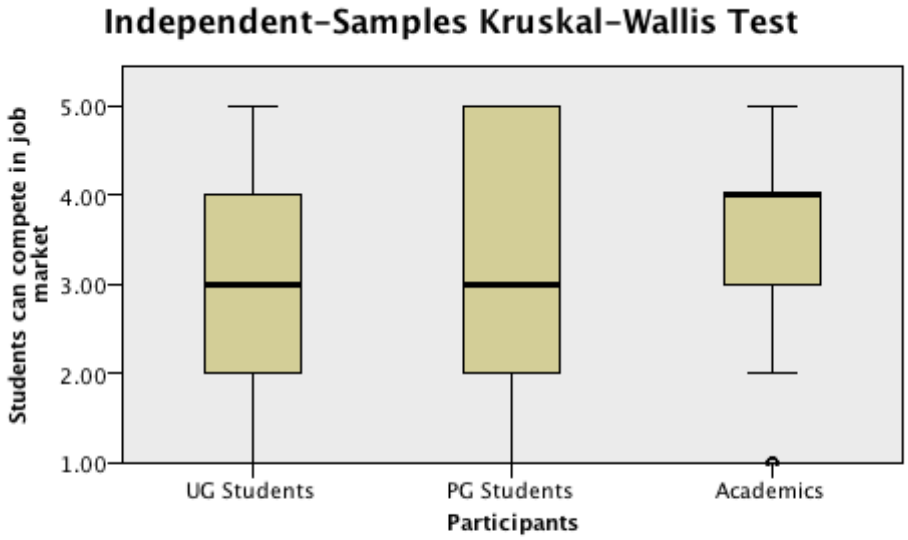

Figure 106: K-W Test (Competing in Job Market)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 17.61, p = .000$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant higher mean rank than PG and UG students, $X^2 = (2, N = 1033) = -3.40, p = .002$, $X^2 = (2, N = 1033) = -4.02, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 3.27 ± 0.08.

Table 88: Pairwise Comparisons of Participants (Competing in Job Market)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
PG Students-UG Students	.565	22.605	.025	.980	1.000
PG Students-Academics	-92.825	27.282	-3.402	.001	.002
UG Students-Academics	-92.260	22.963	-4.018	.000	.000

Over 35% of undergraduate and 40% of postgraduate students believe they are capable of competing in the job market after graduation, while less than 16% of academics believe that the acquired knowledge and skills by student would allow them to compete in the job market (see Q16, Appendix 9.7).

When comparing responses from private and public universities, we find that more than 54% of private university students think they are capable of competing in the job market after graduation, versus less than 35% of public university students. It is noted that more than 66% of private university students see that private universities offer good education, versus less than 34% of

public university students who think that public universities offer good education (see Q22, Appendix 9.5.1).

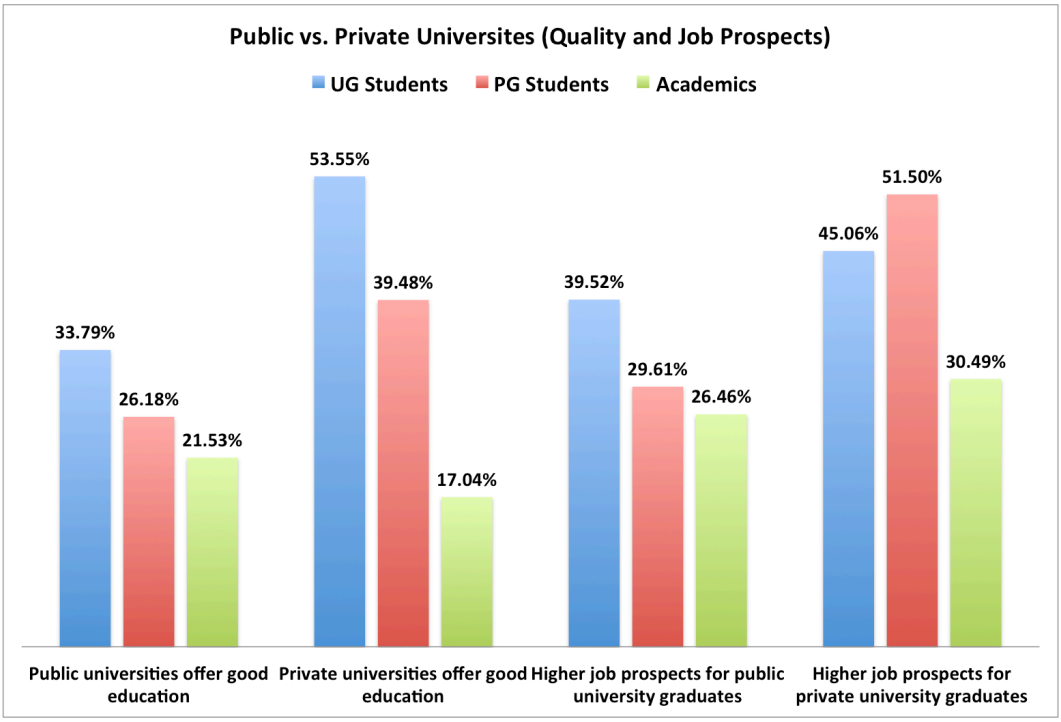

Figure 107: Public vs. Private Universities (Quality and Job Prospects)

The table below (Table 89) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 89: Descriptive Statistics on Private Universities Offer Good Education

Private universities offer good education	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q22/4)	577	2	2.54 (1.24)	[2.44, 2.64]	450.69
PG (Q21/4)	233	3	2.87 (1.32)	[2.70, 3.04]	528.38
ACA (Q16/3)	223	4	3.50 (1.04)	[3.36, 3.64]	676.70
Participants	1033	3	2.82 (1.28)	[2.74, 2.90]	

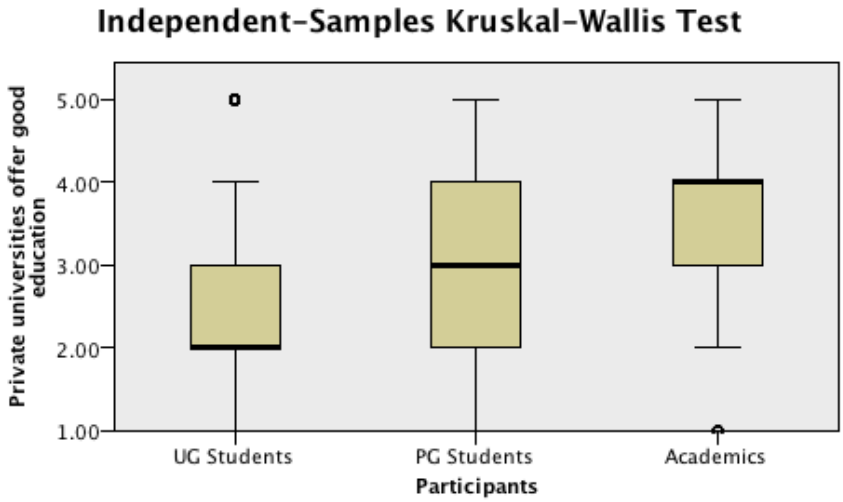

Figure 108: K-W Test (Private Universities Offer Good Education)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 97.45, p = .000$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant higher mean rank than PG and UG students, $X^2 = (2, N = 1033) = -5.44, p = .000$, $X^2 = (2, N = 1033) = -9.85, p = .000$, whereas the PG students scored a statistically significant higher mean rank than UG students, $X^2 = (2, N = 1033) = -3.44, p = .002$. The total population mean is 2.82 ± 0.08.

Table 90: Pairwise Comparisons of Participants (Private Universities Offer Good Education)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-PG Students	-77.692	22.591	-3.439	.001	.002
UG Students-Academics	-226.012	22.949	-9.848	.000	.000
PG Students-Academics	-148.320	27.265	-5.440	.000	.000

There is a noticeable discrepancy between undergraduate students, postgraduate students and academics on the extent to which private universities offer good education: over 53%, 39% and 17% respectively agreed with the statement.

The table below (Table 91) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 91: Descriptive Statistics on Public Universities Offer Good Education

Public universities offer good education	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q22/5)	577	3	3.20 (1.25)	[3.10, 3.30]	499.99
ACA (Q16/4)	223	3	3.30 (0.91)	[3.18, 3.42]	516.30
PG (Q21/5)	233	4	3.42 (1.30)	[3.25, 3.59]	559.80
Participants	1033	3	3.27 (1.20)	[3.20, 3.34]	

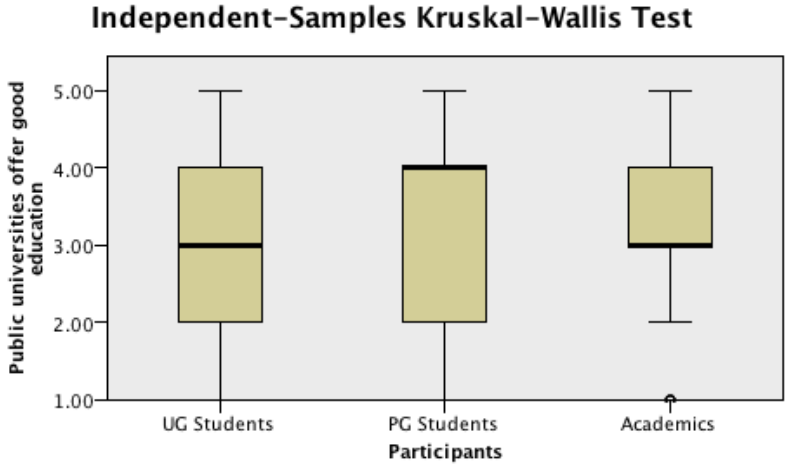

Figure 109: K-W Test (Public Universities Offer Good Education)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 7.07, p = .029$. A Chi-square multiple comparisons test revealed that the UG students scored a statistically significant lower mean rank than PG students, $X^2 = (2, N = 1033) = -2.66, p = .024$. However, the Academics did not differ significantly from UG students or PG students. The total population mean is 3.27 ± 0.07.

Table 92: Pairwise Comparisons of Participants (Public Universities Offer Good Education)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-Academics	-16.313	22.860	-.714	.475	1.000
UG Students-PG Students	-59.810	22.503	-2.658	.008	.024
Academics-PG Students	43.498	27.159	1.602	.109	.328

Less than 34%, 27% and 22% of UG students, PG students and academics respectively agreed that public universities offer good education.

The table below (Table 93) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 93: Descriptive Statistics on Job Prospects for Private University Graduates

Job prospects for private university graduates	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
PG (Q21/6)	233	2	2.56 (1.19)	[2.41, 2.71]	463.33
UG (Q22/6)	577	3	2.73 (1.23)	[2.63, 2.83]	507.97
ACA (16/5)	223	3	3.08 (1.02)	[2.95, 3.21]	596.44
Participants	1033	3	2.77 (1.19)	[2.70, 2.84]	

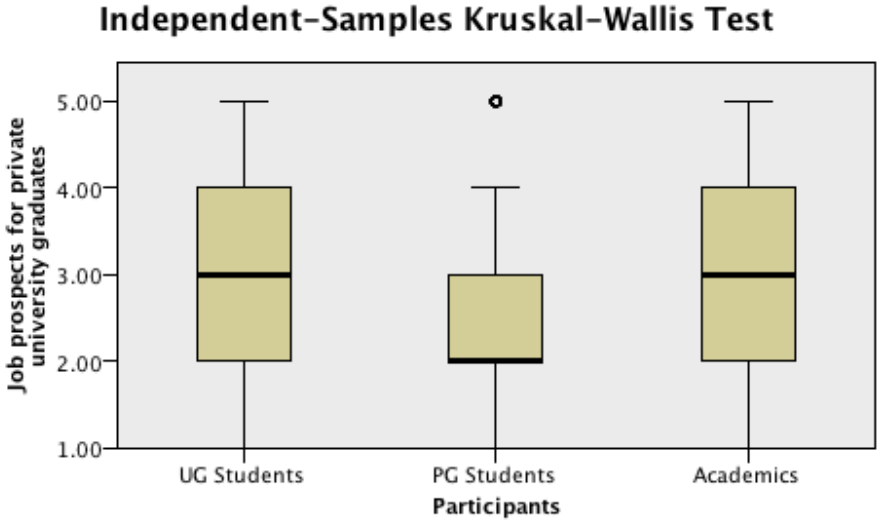

Figure 110: K-W Test (Job Prospects for Private University Graduates)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 25.31, p = .000$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant higher mean rank than PG and UG students, $X^2 = (2, N = 1033) = -4.90, p = .000$, $X^2 = (2, N = 1033) = -3.87, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.77 ± 0.07.

Table 94: Pairwise Comparisons of Participants (Job Prospects for Private University Graduates)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
PG Students-UG Students	44.635	22.494	1.984	.047	.142
PG Students-Academics	-133.111	27.148	-4.903	.000	.000
UG Students-Academics	-88.476	22.850	-3.872	.000	.000

Over 45% of UG and 51% PG student believe that job prospects are higher for graduates from private universities against less than 31% of academics.

The table below (Table 95) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 95: Descriptive Statistics on Job Prospects for Public University Graduates

Job prospects for public university graduates	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
UG (Q22/7)	577	3	2.95 (1.21)	[2.85, 3.05]	489.66
ACA (Q16/6)	223	3	3.16 (0.93)	[3.04, 3.28]	543.69
PG (Q21/7)	233	3	3.24 (1.27)	[3.08, 3.40]	559.17
Participants	1033	3	3.06 (1.17)	[2.99, 3.13]	

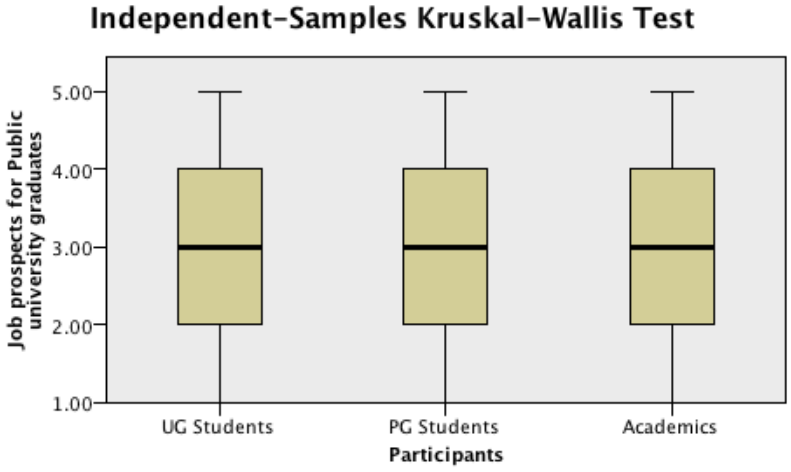

Figure 111: K-W Test (Job Prospects for Public University Graduates)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 11.98, p = .003$. A Chi-square multiple comparisons test revealed that the UG students scored a statistically significant lower mean rank than PG students, $X^2 = (2, N = 1033) = -3.09, p = .006$. However, the Academics did not differ significantly from UG students or PG students. The total population mean is 3.06 ± 0.07.

Table 96: Pairwise Comparisons of Participants (Job Prospects for Public University Graduates)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
UG Students-Academics	-54.033	22.834	-2.366	.018	.054
UG Students-PG Students	-69.519	22.478	-3.093	.002	.006
Academics-PG Students	15.485	27.129	.571	.568	1.000

Over 39% of UG students believe that job prospects are higher for graduates from public universities against less than 30% and 27% of PG students and academics respectively.

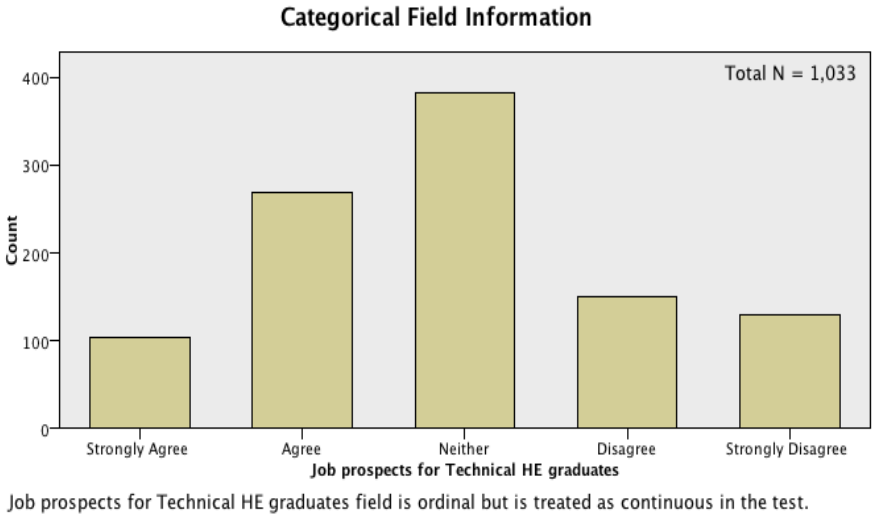

Figure 112: Job Prospects for Technical HE Graduates

The table below (Table 97) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 97: Descriptive Statistics on Job Prospects for Technical Higher Education Graduates

Job Prospects for Technical HE Graduates	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
PG (Q21/8)	233	3	2.84 (1.20)	[2.68, 3.00]	486.27
UG (Q22/8)	577	3	2.86 (1.14)	[2.77, 2.95]	500.13
ACA (Q16/7)	223	3	3.23 (1.03)	[3.09, 3.37]	592.76
Participants	1033	3	2.94 (1.14)	[2.87, 3.01]	

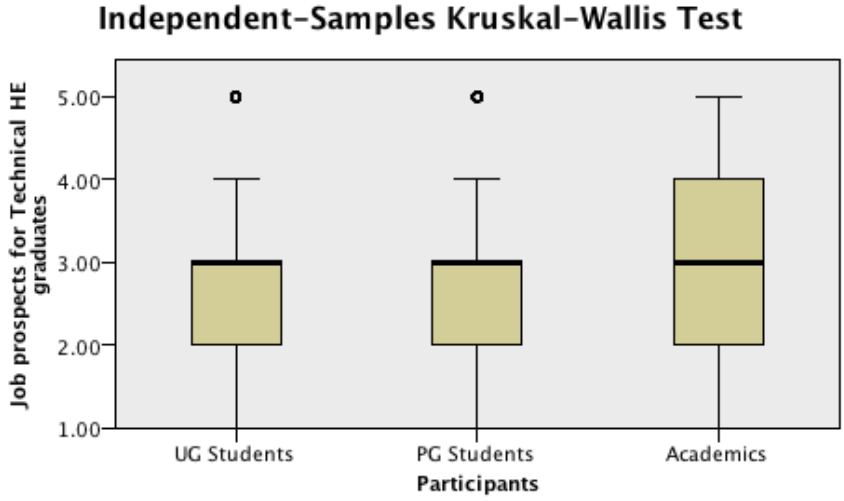

Figure 113: K-W Test (Job Prospects for Technical HE Graduates)

A Kruskal-Wallis H test showed a statistically significant difference among the academics, UG students and PG students, $H(2) = 20.20, p = .000$. A Chi-square multiple comparisons test revealed that the Academics scored a statistically significant higher mean rank than PG and UG students, $X^2 = (2, N = 1033) = -3.96, p = .000$, $X^2 = (2, N = 1033) = -4.09, p = .000$. However, the PG students and UG students did not differ significantly. The total population mean is 2.94 ± 0.07.

Table 98: Pairwise Comparisons of Participants (Job Prospects for Technical HE Graduates)

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
PG Students-UG Students	13.857	22.279	.622	.534	1.000
PG Students-Academics	-106.494	26.889	-3.960	.000	.000
UG Students-Academics	-92.637	22.632	-4.093	.000	.000

26% of academics believe that technical higher education guarantees a fulfilling job and career development against more than 37% of undergraduate students and more than 42% of postgraduate students.

The academics' response to the questionnaire reflected a perception that academic study is detached from real life and job market requirements. They complained that higher education does not fulfil the needs of the job market in the community. They added that the current educational programs do not produce students who are qualified for the job market. They further criticized the insufficient connection between curricula and the job market, not to mention the lack of practical training for students and simulation of the job market inside universities. One of the respondents said that a partial solution to that problem may be for some colleges to require students to do summer training in factories and farms under the supervision of their science department.

Students also criticized the lack of technical connection between graduates and the job market, and the inability of the latter to absorb graduates, as well as the disconnection between scientific research and the industry. The respondents called for education to be connected to the needs of the job market and for students to be trained to compete on a global level. One respondent complained about the missing link between graduate skills and knowledge on one hand and the job market on the other, further stating that non-practical colleges such as law, arts and humanities, and commerce are useless. Another respondent complained that lenience in grading tests meant that graduates were not qualified to deal with the requirements of the job market.

One of the academics also criticized the huge number of students in higher education compounded by a lack of real job opportunities, and stated that the private sector job market required people without higher qualifications, which results in a high rate of unemployment among postgraduates on the one hand,

and a number of technically and educationally unqualified workers in the private sector on the other hand. The academics further complained about the lack of understanding of the needs of the job market, the rampant unemployment, the lack of fulfilling job opportunities for graduates, and the lack of connection between the needs of the job market and the training offered to graduates in different specializations. The respondents attributed the lack of the students' interest in curricula to the lack of real job opportunities for them and the lack of plans to deal with the newly graduated students. One student stated that the subjects he is studying in the field of computer sciences are detached from reality, notwithstanding his love for these subjects.

The academics also criticized the mismanagement of the universities and unsuitability of the relevant bylaws, saying that they need to be amended to produce cohorts of graduates fit for work and the development of the economy. They also criticized the lack of ties with the industrial, agricultural and commercial sectors in order to solve their problems and link scientific research and education to the needs of these sectors. They also criticized the lack of plans to deal with newly-graduated students, as well as the inflexible system which does not allow external non-academic experts to be sought who might be able to help the students adapt more quickly to the job market.

Among the negative aspects that were cited by academics under the subhead of job prospects is the amount of information and skills in areas of specializations that do not match the needs of the current job market. It is noted that less than 29% of academics believe that education and research curricula match the needs of the job market (see Q15/1, Appendix 9.7). Meanwhile, students expressed their worry that they will graduate without having obtained the skills necessary to enter the job market. They were also worried that the educational system does not guarantee students' rights.

From an official position, OFF1 stated that Egyptian university students are aptly qualified, but on a global scale they are still lagging behind in a number of areas, such as languages and general skills. Equally, academics are very capable and can even rival those of universities worldwide. However, with regard to languages and general skills required in the job market, they are still wanting.

The subject matter expert at the OECD, SME2 differentiated between students' demands and job market's demands. She stated that in a global market where there is free choice, training in higher education is demand-driven. Citing Sweden as an example, she said that while ample training is provided in the field of media, based on student demand, there are not enough jobs in the media. Research priorities on the other hand may on the other hand be driven by a country's strategy and occupy a central position, and therefore have funding and resources allocated to it, followed by training in that area.

This section has responded to the second research question on the role of higher education in Egypt, which includes student demand and job prospects.

5.7. Reform of Higher Education

5.7.1. Views of Reform

There is a consensus among students that there is a lack of vision for reform and the lack of concern for quality. More than 64% of undergraduate and 58% of postgraduate students believe in the importance of higher education and its vital role in development. However, more than 96% of undergraduate students and 97% of postgraduate students believe that higher education in Egypt needs reform. The major concern among students is that graduates lack the skills necessary to compete in the job market to an extent that some of the students suggested decreasing the number of enrolled students at universities in order to improve the quality of education.

It is also noted that less than 23% of academics at universities and higher institutions believe that the current higher education serves a vital role in development. More than 98% of academics consider that higher education needs reform.

On the other hand, more than 49% of academics believe that political changes after 25th of January revolution has had a positive impact on reforming higher education, whereas less than 27% believe that there is a political will to reform higher education and less than 24% believe that reforming higher education is at the top of the government priorities. Furthermore, over 56% of academics do not see any value in the government programme for higher education quality assurance.

It is worth highlighting that more than 62% of academics believe that there are possible ways to reform higher education without securing enormous investments against less than 22% (see Q22, Appendix 9.7).

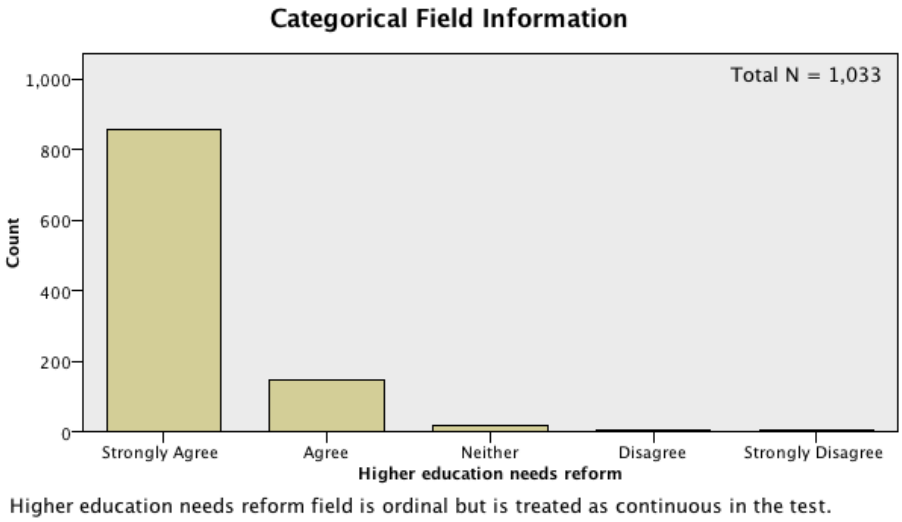

Figure 114: Higher Education Needs Reform

The table below (Table 99) shows the descriptive statistics with confidence intervals that are ascending according to the mean, along with the mean rank, where the minimum is 1 (strongly agree) and the maximum is 5 (strongly disagree).

Table 99: Descriptive Statistics on Higher Education Needs Reform

Higher education needs reform	N	*Md*	*M* (*SD*)	95% *CI*	Mean Rank
PG (Q21/1)	233	1	1.16 (0.53)	[1.09, 1.23]	490.24
ACA (Q16/1)	223	1	1.23 (0.54)	[1.16, 1.30]	522.59
UG (Q22/1)	577	1	1.24 (0.59)	[1.19, 1.29]	530.49
Participants	1033	1	1.22 (0.57)	[1.19, 1.25]	

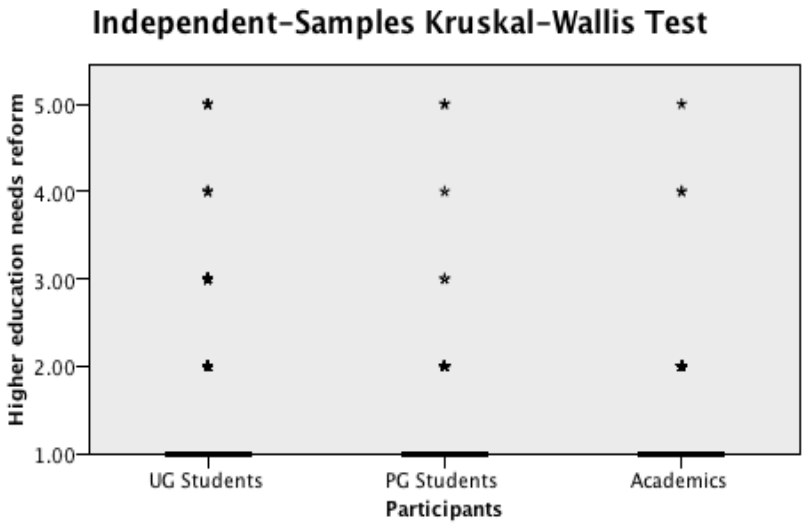

Figure 115: K-W Test (Higher Education Needs Reform)

A Kruskal-Wallis H test revealed no significant differences between the UG, PG and Academics groups, $H(2) = 5.89, p = .053$. The total population mean is 1.22 ± 0.03. As mentioned above, more than 96%, 97% and 98% of UG students, PG students and academics respectively believe that higher education in Egypt needs reform.

From a different perspective, the SME2 at the OECD indicated that higher education is part of a wider education system and relies on public funds, hence it is anticipated that any reform may need to extend to include secondary education.

5.7.2. Government Intention

In the current complex political and economic situation, it is noted that less than 50% of the academics believe that the post-revolution political changes in Egypt will have a positive impact on higher education reform. On the other hand, more than 46% of academics believe that there is no political will to reform higher education and over 52% of academics consider that higher education reform is not on the list of the government's priorities.

PIF1 attributed the education problem in Egypt to the lack of sufficient funds. Education has not deteriorated as a result of bad intentions, but due to demagogy. Governments after the 1952 revolution promised the people more than they were capable of and they were not capable of keeping up the pretense. More recently, SME2 pointed out that many governments in less

developed countries claimed that they would like to embrace innovation and creativity and to have strong higher education, but they never delivered on this, and appear never to have had the intention to do so.

OFF1 pointed out that the newly-appointed higher education minister has put in place a new strategy to develop higher education that we have yet to see implemented. However, since 2013 the ministry of higher education has already had four ministers (OFF2). It is worth mentioning that OFF1 believes that pre-tertiary education comes at the top of the state's priorities.

5.7.3. International Organisation

SME1 viewed the essence of the OECD position as being the support of the global trend of higher education massification, in order to make higher education available to far more people.

SME2 explained that while the nature of the OECD's projects is long term, the political mandates are tied to a limited number of years. She asserted that efforts are made to convince the member countries to commit to the longer term. However, there is likely to be enormous pressure on projects to deliver results within a limited period to justify the investment. This situation is quite common in most international organizations. SME3 meanwhile described one of the specificities of UNESCO as being the fact that it considers higher education within the continuum of overall education, rather than being isolated from the rest of the education system.

OFF1 stated that it is in the interest of Europe to ensure that the immigrant workforces are qualified.

OFF1 believes that organizations that are linked to the EU share the same rationale and interest in education as their neighbours south of the Mediterranean, which has enabled the implementation of mutual educational programs.

SME2 explained that the international organisations' research and recommendations are often guided by the need to invest in a certain area. Nowadays, they have become more responsive to the needs of the funded countries. However, sometimes a country's needs and the international

organisations' agenda do not even overlap.

SME2 stated that an international organisation's approach distinguishes between member and non-member states: "*we are much more free to not care about the sentiments of the [non-member] country, which is sometimes good and sometimes bad*". SME1 thinks that *"non-members benefit from us much more than the members because the members are very sensitive and they don't want to be criticised"* on a sensitive subject such as education. He gave an example of the reviews of education policies in member states. The last review on France was in 1995 and the last review on Spain was in 1994. The OECD contribution in these reviews was a survey, since France and Spain did not want more involvement by the OECD to avoid any exposure of their political position. They performed worse than many countries and the outcomes were predictable. SME2 provided another example, namely the full review of Sweden that has recently been conducted by the OECD and that served the political purpose within the country's political environment. Some of the recommendations were quite critical of Sweden, but these were seen as a buy-off.

Developing countries may have an advantage over OECD-member countries which have established traditions and strategies, and whose universities date back to the thirteenth century. It is more difficult to change the established traditions in higher education in the developed countries than in the less developed countries. However, the less developed countries can frequently be too flexible in their willingness to change. Sometimes they go even further to change everything at the same time without identifying the merits or the successful components of the existing higher education system (SME1). However, not all less developed countries respond to the reform of higher education in the same way. For example, Francophone countries may be as resistant to change as France itself (SME2).

SME3 expressed her belief that international organisations share similar goals in that they all have the best interest of the country at heart. However they (e.g. UNESCO, World Bank) differ from each other in terms of the objectives of each institution, the way they work and their missions. This difference does not mean that international organisations are incompatible – it is more likely that they

complement each other.

SME3 described UNESCO's mandate as unique, since it focuses on the provision of frameworks and guidelines. She stated "*We are an intellectual leader in guiding what's going on in the world, what do we think is the best approach to a certain topic, but of course we're very respectful of each country's culture*".

When it comes to one-size-reform-fits-all, SME3 believes that the OECD country reviews need to draw on similarities rather than the differences, while PIF1 believes that "*people working in the World Bank and other international organizations are employees and their job is to write reports…. Reform requires the loyalty of the workers to the country*".

5.7.4. Priorities

The views of undergraduate and postgraduate students concerning the priorities of higher education reform varied. However, the top three priorities in both surveys were the same, albeit in varying order, with a considerable margin from other priorities. For undergraduate students the reform priorities are, in order: teaching methods, school curricula, and academic staff. For postgraduate students these are: academic staff, teaching methods and curricula. It is worth mentioning that reforming university academic staff was the top priority cited by Masters and Ph.D. Students, while reforming teaching methods was the top priority cited by higher diploma students (see Q23, Appendix 9.6.1).

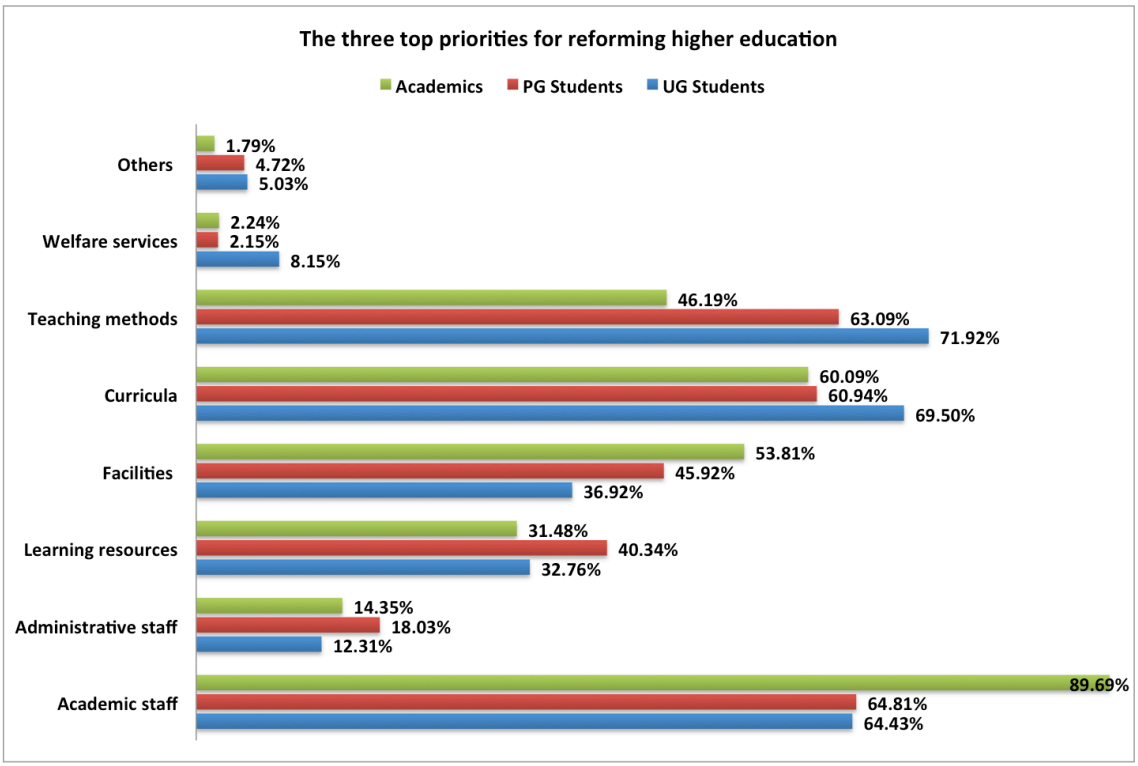

Figure 116: The Three Top Priorities for Reforming Higher Education

When talking about reforming academic staff, one student called for the elimination of nepotism in recruiting the children of the academic staff, describing this phenomenon as a plague that is infesting the university community. The student further suggested that this is a major reason for Egypt's backwardness and deterioration.

As for developing the curricula, the respondents called for development of the theoretical and practical curricula and for taking the skills necessary for the job market into consideration.

On the subject of developing pedagogical, teaching and research methods, a student called for the development of teaching technology at universities in terms of curricula and academic studies.

Among the other priorities demanded by the students was an increase in the higher education budget and for the whole system to be restructured. They also demanded that students be given priority and respect, and not to complicate examinations. They called for the quality of education to be raised and for the study subjects to be made applicable to reality in order to develop the country and not merely provide higher degrees. On the topic of improving facilities, a student said that the faculty building where he is studying, along with many

other buildings, needs radical renovations and a great deal of engineering. They said that transportation means need to be available as well as accessibility for people with special needs.

Among the other priorities mentioned by the students were the introduction of decent evaluation criteria and standards for education quality, as well as greater dedication and better ethics.

On the other hand, over 89% of academics stated that reforming the academic staff is the top priority for reform. The priorities that followed were curricula, facilities that include rooms, laboratories, libraries, etc. and finally pedagogical and teaching methods by 60.09%, 53.81%, and 46.19% respectively and with a considerable margin from the rest of the priorities.

On the topic of improving academic staff, the academic respondents called for staff to be selected based on their ability to teach the students and instil learning in their minds. They explained that not all academic staff have this talent; some can do it effortlessly while others can only carry out scientific research. One of the respondents said that this is why it is important to distinguish between academic staff according to their abilities, and that it should not be taken as some kind of offence.

Among the other priorities cited was for strategic planning and scientific research to be carried out according to international standards by adopting the approaches of the top 100 international universities wholesale, and setting up a research organization. One of the respondents added that failure to emulate the research process adopted by the top 100 universities would always place the nation back at square one. The respondent also called for lower limits on the number of students in lectures and lessons in order to enhance the performance of the academic staff and benefit the students.

Other priorities for reform are: reducing student numbers and restricting admissions; dealing with the ‘scourge’ of private tuition; universities’ admission policies in terms of balancing specialisms in accordance with the needs of the market; improving lecturers’ skills (whose level has dropped, frequently for material reasons); improving the standards for selecting lecturers, including the system of promotions and appointments (currently, incompetent lecturers are

promoted notwithstanding their lack of merit, and this affects students).

PIF2 believes that there should not be any priorities. Reform should occur on all fronts simultaneously, according to a long-term plan for higher education, which should be integrated with other sectors, particularly the economic, and development sectors. However he emphasised the quality of teaching, including teaching in pre-higher education. He stated that "*Unfortunately we're not moving at all, we're not moving and consequently things are getting worse. If the basic required reforms are undertaken in other fields, particularly the political and economic fields, this may have immediate and impressive benefits for higher education*".

5.7.5. Prerequisites

Political and economic reform, among others, is a prerequisite for the reform of higher education (PIF2). On this issue, over 81% of academics believe that freedom and democracy are essential prerequisites for higher education reform. However, less than 50% of the academics believe that the post-revolution political changes in Egypt will have a positive impact on higher education reform. On the other hand, more than 46% of academics believe that there is no political will to reform higher education and over 52% of academics consider that higher education reform is not on the list of the government's priorities (see Q22, Appendix 9.7).

Universities are the places where freedom of speech, democracy, critical thinking, citizenship and other issues linked to society at large in any given country are nurtured. However, according to SME3 at UNESCO, the main resistance to change comes from universities. Reforming higher education will require social pressure and willingness from the government and from the higher education institutions. She states: "*For a higher education reform to happen in a country, I do think there has to be a sense of crisis. Because in my experience, universities, which were supposed to be an agent of change, because they change the social and economic structure of the country just by their teaching, are the most reluctant institutions to change*".

In explaining his position, PIF1 highlighted that democracy, the system required to protect freedoms, has two aspects: one substantive and one procedural

aspect. The substantive aspect is the foundation of democracy, which protects freedoms. This protection requires mechanisms and procedures, such as majority rule, which should not be allowed to supersede human rights. Hence, PIF1 believes that educating people comes first, leading to substantive democracy. If applied correctly and in an educated society, the rule of the majority is simply a procedure in a mechanism within a wider educational context. Democracy needs to be practised by society in order to learn from the errors committed.

On different note, SME1 at OECD identified public sector reform in Egypt as a major prerequisite for reforming higher education, since the public sector controls and manages regulations and legislation.

On the other hand, PIF1 proposes an even more generic approach for reforming higher education in Egyptian society which is dealing with a major cultural issue directly related to people's beliefs: "*It is essential that we clean up our minds of a large number of myths and illusions. People need to get rid of religious myths, to know that science has proven its aptitude. But we also need to remain critical. We need to have faith that science is a very important tool for mankind and that the human brain has achieved massive breakthroughs*". He identified the starting point of transformation of the Egyptian society: "*In a country like Egypt, people need to forget that religion interprets things for them – it's a completely different objective – God is not offering us a scientific theory, but is guiding us to faith*".

PIF1 raised another generic issue that may have a considerable impact on Egyptian society, namely that of trust. Students need to have confidence that the teacher has the knowledge, is capable of teaching and is offering a service: "*Confidence cements society – no society can build itself without confidence*". PIF1 pointed out there was a low trust culture among students, expressed in terms of lacking trust in the benefits of knowledge and science, trust in the teachers who are seen as only being after private tuition, and trust in the usefulness of schools. He attributed the lack of trust in Egyptian society to political reasons: rulers, and consequently the whole system, have always been viewed negatively and with suspicion.

PIF1 also observed that the devaluation of schools has been coupled with a

drop in appreciation for shared values that are worth preserving. He noted: "*When I was in school there was a perception that sheikhs, who were known as 'alim' (scientists or 'knowers') were backward if they wore the 'Jubbah' cloak. Sharia lecturers would therefore dress up in a Western-style suit*". He emphasised that a sense of belonging and respect for institutions needed to be re-established. Nevertheless, the teacher is respected and appreciated. These positive values need to be deeply rooted into society and to be associated with a wider context of tolerance and open-minded approach to others.

From another perspective, PIF2 believes that the media policy needs to be changed to reflect a new spirit that contributes to the reform of higher education as a national project. The media influence on the younger generation is immense, and it is through the media that they receive very conflicting messages (e.g. through TV drama) that undermine education and science in general to meet the taste of the approximately 40% sector of the Egyptian population which is illiterate. In addition to that comes the widespread writing of the Arabic language in Latin script among a highly educated portion of society, to send an implicit message that they are modernised and different from the majority.

On the other hand, PIF2 attributes the decline of the quality of higher education to the educational level attained by students in previous stages. Hence, reforming higher education requires reforming the preceding stages. However, if the basic required reforms are undertaken in other fields, particularly the political and economic fields, this may have great benefits for higher education. He states:

> "*Reform will take time, and in my opinion we have been deteriorating for the past 50 years. I believe the prerequisites for the reform of higher education are economic reform and political reform, in other words there should be a will for reform. Freedoms and democracy are not prerequisites for the reform of higher education but they are outcomes of educational reform. If there is real democracy it will help reform higher education, but I don't believe that it's a condition. In my opinion Abdel Nasser undertook reforms in education in his early years, and that was under a dictatorship. And before Abdel Nasser, there were reforms in education under a relative*

democracy. And in Russia, great progress was achieved in education under a terrible dictatorship. So it's not a necessity" (PIF2).

In sum, political stability including freedom and democracy, economic reform and public sector reform have been identified as prerequisites for reforming higher education along with cultural and social issues such as trust, shared values and belief in science. This will be discussed in the next chapter to answer the third research question on the prerequisites and priorities of higher education reform in Egypt.

5.8. Summary of Findings

The landscape of higher education in Egypt has been explored over a wide spectrum of themes to provide a context that is shaped by the perspectives of undergraduate students, postgraduate students, academics, officials and prominent intellectual figures. Their views and perceptions have incorporated educational, economic, social and cultural aspects, providing a widely neglected but indispensable dimension in the reform of higher education in Egypt.

The students and academics profiles have been presented in the Appendix 9.13, including their geographical distribution across Egypt. A summary of the findings is provided below to answer the research questions on how higher education is perceived by students and academics in terms of curricula, teaching, research, resources and facilities, fees, ethics and values, and the overall quality of higher education. Findings also answer the question on the role of higher education within the context of student demand, job prospects and the social and economic development, and finally, the question on the priorities and prerequisites of higher education reform.

University Coverage of Governorates

The distribution of non-home-based students, as demonstrated by the survey conducted within the framework of this research, has revealed a high proportion of non-home students in the Greater Cairo area, which reflected the shortage of higher education institutions at both undergraduate and postgraduate levels in 18 out of 27 governorates. The distribution also revealed a degree of inequality towards female students.

Curricula Relevancy

Despite the fact that a considerable portion of students stated that modules were relevant to their study, there was wide consensus among both the students and the academics participating in the survey that the knowledge and skills obtained by students during their studies did not prepare them for the needs of the job market or the community. Students complained of too many theoretical subjects and too little practical application or use of modern technology.

The English language skills of both the academic staff and students have been found to be weak and there is a demand for reviving the Arabisation movement.

Teaching

Students expressed their dissatisfaction with the poor teaching skills and obsolete pedagogical methods relying on memorization and copying off the blackboard rather than critical and analytical thinking or practical application. They further complained about obsolete technologies and pedagogical tools as well as the lack of equipment and facilities.

On their part, academics were equally critical about the lack of practical training, the lack of equipment, the reliance on traditional teaching and research methods, and the incompetence of some of the academic staff. They complained about the lack of interaction between students and teachers.

Students criticized the overreliance on theoretical exams, which measured memorisation rather than critical thinking and comprehension skills, as well as the lack of clear marking criteria. They expressed their concern that knowledge acquisition was not effectively monitored and was subject to rigging.

Private Tuition

According to the results of the undergraduate survey, more than 24% of students use a private tutor in at least one subject, compared to less than 8% of postgraduate students.

The most-cited reasons for resorting to a private tutor vary for both undergraduate and postgraduate students were the lecturers' inability to explain the modules, overcrowded lecture halls and module difficulty.

The academics attributed the phenomenon to overcrowded lecture halls and the students' habit of relying on private tutors from early on in their school education.

Research

On the topic of research, academics stated that there was a lack of interest in the results of their scientific research, which found no application in society, and the absence of an environment conducive to research. They complained about the lack of funds, facilities, and labs. Less than half of academic stated that they had the time to carry out their own research, while only one third of them reported having enough funding for research.

In relation to research students, less than 32% of academics were satisfied with the number under their supervision, and less than 39% of academics expressed confidence in their students' research skills.

Resources and Facilities

There appears to be a severe lack of learning and research resources and facilities in the higher education scene in Egypt. This has a great impact on the quality of the education provided and indeed the perception of higher education among students and academics. Postgraduate students and academics bemoaned the neglected library collections and the lack of digital and traditional resources required for their research. More than 66% of private university students stated that the library resources and services were sufficient against less than 44% of public university students.

With regard to building facilities, students as well as academics criticized their unsuitability for learning and the lack of services and labs and the dilapidated state of what equipment was available. Less than 34%, 32% and 24% of UG students, PG students and academics respectively reported their ability to access specialized devices, laboratories, and rooms whenever needed.

Respect, Trust and Understanding

The survey revealed perceptions of levels of treatment within the university campus: More than 73% of academics stated that students are treated with respect, while only 60% of them stated that there are mutual feelings of respect

and trust between the academic staff and students.

Meanwhile, more than 38% of undergraduate students and 39% of postgraduate students expressed their perception that university students are not treated with respect, while less than 8% of undergraduate students and over 12% of postgraduate students stated that academics are not treated with respect inside the university.

On the issue of ethics and favouritism, students expressed their frustration at exam results rigging in favour of the families and acquaintances of academic members to ensure they are hired, despite being incompetent.

Academics confirmed the existence of favouritism, and on their part complained of students' lacking appreciation for knowledge, their low morals, cheating practices, and reliance on private tutoring, adding that students were not yet prepared for a new student-centred learning method.

Undergraduate students widely believe that there are no accountability measures for academic staff, who abuse their authority against the students and threaten them with failure regardless of their performance or the exam criteria.

Fees

More than 71% of undergraduate and 74% of postgraduate students expressed willingness to pay higher fees for public universities in return for a better quality of education and services. Private university students also declared themselves willing to pay fees for public universities if they were to study there.

Satisfaction

The students' responses to questions on the quality of higher education and the quality of the services pointed to a high degree of consensus among them on these issues. Less than 28% of undergraduate and 27% of postgraduate students expressed satisfaction with the quality of education and services provided by the universities and higher institutions, while more than 53% of undergraduate and 57% of postgraduate students expressed dissatisfaction with the same.

Merits of Current Higher Education

Despite the general agreement over the low quality of higher education in Egypt, more than half the academics at higher education institutions have highlighted certain merits to the current, such as its ability to accommodate a great number of students, the impartiality of the enrolment office, and the state-run free education which serves all strata of society.

One obvious merit is the existence of a higher education infrastructure which has the potential of being developed, as well as a reasonable number of universities and trained staff.

University Role

The role of higher education in a given country should be customised and integrated into a wider national strategy to meet the actual needs of the society.

Universities are perceived among Egyptian academics and students as playing a vital role in development, despite the recognition that higher education is in need for reform. The academics specified the three principal roles of universities as being scientific research (84%), education (74%), and community service (69%). However, they criticized the fact that universities are not exploiting their potential to deal with the problems of society.

Student Demand

This survey highlighted a discrepancy between the academic programmes studied by over 59% of the students and their course preferences, which is due to the regulatory framework and the limited choices available to students. This reveals that the current framework fails to meet either the job market requirements or the students' aspirations. While private universities may to a certain extent fill this gap, they may decide to only focus on subjects that do not require much investment in infrastructure.

Both undergraduate and postgraduate students cited their main reasons for pursuing their studies as being: boosting job prospects, gaining knowledge and skills, enhancing social image, and social networking. Additionally, postgraduate students mentioned pursuing a career in academia and contributing to scientific research advancement in Egypt.

While the top reasons for pursuing university studies may be linked to national objectives and priorities, it should be noted that a significant portion of students said that they were pursuing their studies for their own leisure, for social reasons or in connection with their personal beliefs. Hence, a wide range of modalities to respond to this demand is needed.

Jobs

While most undergraduate and postgraduate students participating in the survey had specific plans for their careers after graduation, a substantial portion of them considered themselves incapable of competing in the job market. The responses of academics meanwhile reflected limited optimism with regard to the career prospects which a university degree promises: Less than 16% of them expressed the view that after graduation, students are qualified to compete in the job market, with less than 37% of them believing that university degrees ensure career prospects in the students' fields of specialization, and less than 29% stated that the curricula and education matched job market needs.

Although the general perception among students was that private university students had better job prospects than public university students, the percentage of students considering themselves incapable of competing was higher among private than public university students. Among academics, a higher percentage saw better job prospects for private than public university students.

Technical higher education was seen as a guarantor of good job prospects among over 42% of postgraduate students, over 37% of undergraduate students and less than 27% of academics.

Some academics took the view that the number of students in higher education was too large, noting the lack of real job opportunities, and the fact that the private sector job market did not require higher qualifications. They pointed to the inadequate understanding of the job market needs and the rampant unemployment.

SME2 at the OECD stressed the fact that in a global market, higher education is demand-driven, so the distinction between the demands of students and of the job market are both considered. They added that research priorities on the

other hand may be driven by a country's strategy, and thus have funding and resources allocated.

Reform, Priorities and Prerequisites

The vast majority of academics and undergraduate as well as postgraduate students surveyed agreed that higher education in Egypt needs reform, and that there is a lack of a vision for reform and the lack of concern for quality.

The top three priorities stated by both undergraduate and postgraduate students for higher education reform were (in different orders): teaching methods, school curricula, and academic staff. The vast majority of academics stated that reforming the academic staff is the top priority for reform, followed by curricula, study subjects, and facilities.

The reform should occur on all fronts simultaneously, without specifying priorities, according to a long-term plan, which should be integrated with other sectors, particularly the economic, and development sectors.

Quality

Academics expressed their scepticism of the effectiveness of the quality assurance program introduced by the Ministry of Higher Education, and over 62% of them stated that they were not satisfied with the quality of higher education, however they agreed that it was possible to reform it without resorting to large investments.

SME2 at the OECD believed that quality assurance frameworks were required to ensure enrolment expansion can take place without lowering the quality of higher education.

PIF2 stated that the unemployment among university graduates was caused by the low quality of higher education, but also by slow economic growth, inadequate economic policies, and low morale among students and teachers.

CHAPTER 6

6. DISCUSSION

6.1. Introduction

In Egypt, a country where universities traditionally lack independence, reforming higher education without appropriate public support and a clear definition of the role of higher education in the wider development goals may have severe consequences, including inequality in society, and Egypt becoming a mere consumer in the global higher education market. The World Bank and OECD model of higher education reform, based exclusively on the requirements of the knowledge economy (expansion of enrolment), risks actually exacerbating existing divides and creating new forms of exclusion within the country as well as globally, as the state reduces its commitment toward higher education. This may further cause commoditisation in higher education and produce graduates without the skills needed for job market. Widening the admission criteria for higher education as described by the OECD reflects a lack of awareness of the reality and may lead to the collapse of the whole education system. Educational reform which fails to profoundly understand and comprehensively address socio-cultural realities will remain inadequate for the Egyptian context.

This chapter discusses the findings of the questionnaires and the interviews within the context of the conceptual framework of the thesis (see Section 3.9, 'Conceptual Framework'), to achieve the overall aim of identifying the characteristics of a tailor-made model for reforming higher education in Egypt.

The conceptual framework is based on a positioning of higher education according to the interacting dimensions of society, state and market that shape higher education. The state's role is to achieve the required balance between provision of higher education (state-centric model) and regulation of higher education (neo-liberal model). The size and role of private higher education as well the efficiency of the regulatory framework are among the criteria for the positioning of higher education along a continuum from a regulating role to a provision role, whereas the societal dimension determines to what extent higher education is considered public good (state-centric model) vs. private good (neo-

liberal model). On the other hand, the market dimension stipulates the value of higher education and how it is perceived, whether as an investable commodity (neo-liberal model) or a human right (state-centric model).

The concept of reconciliation between state, society and market is a necessity to maintain the required balance, due to the continuous interaction and influence across the three dimensions over various issues on higher education. As mentioned earlier (see Section 3.9, 'Conceptual Framework'), in the context of the global knowledge economy, the market dimension takes the lead over the state and clearly over society. Adjusting the state's role for reforming higher education within the context of a knowledge society framework (see Section 3.8, Knowledge Economy and Knowledge Society Frameworks) in such a way that allows for wider cultural and social considerations to be taken, should maintain the balance in favour of society.

The discussion is organised according to key themes, which together will form the basis for the characteristics of a tailor-made model for reforming higher education. The discussion concludes with the prerequisites that are essential for reforming higher education in Egypt.

6.2. Expansion and Inclusiveness

Egypt has not been able to stay on top of the ever-increasing number of students seeking to enter higher education. In addition, the quality of higher education in Egypt has not kept pace with international standards as the findings have demonstrated in regard to various aspects (curricula, teaching, research, academic support, learning resources and facilities, etc.). A comprehensive reform of the higher education system is needed to address the skills gap and the knowledge divide for economic and social development in a knowledge-based world.

Higher education in Egypt appears to be disengaged from national objectives and priorities. While national development plans are currently focusing on the development of eastern Egypt, especially the Suez Canal region, there is no indication that these national development plans are in any way reflected in the strategic plans for higher education. Expansion of enrolment in higher education in Egypt is likely to increase the dissonance between the current situation and

the national development plans.

The findings have shown that ‘overcrowded lecture halls’ is one of top three reasons cited for using a private tutor for over 24% of students. The academics’ questionnaire suggested that there is a high level of dissatisfaction with the growing number of students admitted to universities, which far exceeds their capacity as shown in the findings. In spite of this situation, recommendations by international organisations, such as the OECD, always include the expansion of student enrolment in higher education as an essential component of the formula for reforming higher education in the less developed countries. This may not always be advisable however. The findings indicate that a blanket enrolment expansion within the limited financial resources and the current status of higher education in Egypt is neither a prerequisite nor a priority for reforming higher education. It is unlikely to improve either the quality of higher education or the job market outcomes. The expansion as proposed by the OECD (OECD, 2010) may exacerbate the quality of higher education even more.

If Egypt cannot offer a higher education of adequate quality as demonstrated in the findings, with the current relatively large number of students, how can it be expected to expand higher education without diluting the quality even more?

SME2 at OECD believes that expansion in the private provision of higher education, which is one of the fastest growing sectors of higher education, is one of a wide range of modalities to respond to the high demand. This assumes that students’ demand of higher education is a primary area of reform, despite the fact that expansion is not one of priorities stated by stakeholders (students and academics) for reforming higher education. Students’ demand is an effect of certain economic, social and cultural causes, which do not necessarily fall within the domain of higher education. As per the findings, a considerable portion of students enrolled at university for cultural and social reasons rather than gaining knowledge and skills, or boosting their job prospects.

On the other hand, Fahim and Sami (2011) considered the expansion of private higher education, among other actions such as limiting government subsidies and introducing higher student fees in public HEIs, to be the way forward for reforming higher education and expanding equal access to higher education. This approach makes the underlying assumption that financial resources are

the only major barrier for good-quality inclusive higher education, despite the other regional examples of modest higher education output in some Arabian Gulf countries (e.g. Saudi Arabia), where massive financial funds are allocated for higher education. It seems that financial resources alone are not enough for the reform of education.

Despite the variation in the views and experience among UG students, PG students and academics, the findings have shown a modest satisfaction with the quality of education offered by private universities (less than 54%, 40% and 18% respectively). It is unlikely that expansion of private higher education would automatically improve the educational quality because of its funding structure (Assaad, Badawy, & Krafft, 2014).

El Gamal and Abd El Aziz (2012, p.355) believe that "*the adoption of e-learning in Egypt can provide a suitable solution to HE problems by filling in the gap between the number of available university places and the growing demand for HE*", but they also considered cultural awareness and accreditation of e-learning degrees to be the main challenges for e-learning programmes in Egypt. Indeed, the E-learning modality has a great potential for responding to the growing student demand, bearing in mind a variety of motivations for pursuing an undergraduate degree. However, the implementation of such an initiative prior to a successful comprehensive reform will be a reproduction of the current modest quality of education and the outstanding issues will be inherited as a matter of course. One of the major concerns among the stakeholders is the quality of the curricula provided in higher education and the relevance to the job market. The findings showed that less than 29% of academics believe that education and research curricula match the needs of the job market. On the other hand, only less than 46% of undergraduate and 47% postgraduate students deemed their modules intellectually stimulating and motivating with a limited choices of elective modules available for the students. Despite numerous MoHE funded projects (e.g. ICTP) for digital libraries and e-learning resources across all public universities, they have failed to reach a significant proportion of students. More than 35% of undergraduate students and 17% of postgraduate students reported the lack of an e-library in their universities.

On the equality aspect of higher education, inclusiveness in education has been

a principal concern of Egyptian rulers since the 1952 revolution, mainly for political reasons rather than for any prioritisation of social justice and economic development. However, as mentioned earlier, it appears that educational inequalities will persist until the most advantaged socioeconomic groups have saturated their demand for higher education (Raftery and Hout, 1993 cited in Cupito & Langsten, 2011). Indeed, Cupito and Langsten find that in Egypt, higher education enrolment of students from the wealthiest quintile remained highest, as they were able to maintain their clear advantage. However, educational inequalities have been identified in this research at development level across Egyptian governorates.

As per the findings, there is a shortage of HEIs at both undergraduate and postgraduate levels in 18 out of 27 governorates. Hence, there is a potential for expanding higher education within the context of inclusiveness, however priorities should be given to the Egyptian governorates, which lack universities to accommodate the anticipated enrolment growth rate of 40% of the age group by 2022 (Helal, 2011).

Expanding higher education geographically to the less advantaged governorates should contribute to the equality among students across Egyptian governorates and to the socio-economic development of these governorates. This would be more viable and efficient rather than expanding higher education in the overpopulated governorates to saturate higher education demand for the most advantaged socioeconomic groups to achieve the alleged equality.

6.3. Quality of Higher Education

The study's findings have revealed great concern among stakeholders when it comes to the quality of higher education in Egypt (with variations in quality across subject areas) and the minimal contribution of higher education to the economic and social development of Egypt. The findings showed a consensus of dissatisfaction among students and academics alike. Students and academics agreed in their view that university studies, with too many theoretical subjects and too little practical application, did not furnish students with the knowledge and skills that would adequately prepare them for the needs of the job market. Students highlighted poor teaching skills of academics, while lack of

training and equipment was highlighted by academics. These conditions led students to rely on private tutoring, and to declare themselves willing to pay fees for public universities if this meant better quality education. Morgan and Wu (2011, p.4) raised a similar concern in relation to the quality of higher education in China, "*(t)he quality of graduates does not match the needs of employers in different sectors. This can be observed from different aspects such as inappropriate knowledge base, lack of practical expertise and operational capacity, low moral standards and inadequate sense of social responsibilities*".

It is not possible to envisage high quality education in the absence of adequate financial means. As one expert noted (SME3), higher education needs to be reformed within the framework of the knowledge economy (which considers higher education as an investable commodity). However, an example from this study is the low performance of private universities in Egypt and the modest quality of their graduate students; despite the fact that they charge students fees, which are relatively high even by international standards as demonstrated in the findings. Fahim & Sami (2010) have further pointed out that the share of public expenditure on higher education in Egypt (2007/08) was close to the corresponding averages for the OECD countries as well as lower middle-income countries. However, this has by no means been reflected on the quality of higher education. It cannot be assumed that allocating more funds for higher education will improve the quality of higher education in the absence of an efficient operation policy along with a sound regularity framework. As demonstrated in the findings, misallocation of resources and inadequate distribution of resources affects the quality of higher education. It is worth emphasizing that there is no point reforming higher education without securing appropriate funds to do so. Providing education by half measures produces a useless education system that is not adding any value to the country's economic development, while also damaging social values and trust in educational values.

The exploration of the current status of curricula in higher education revealed an awareness of the weak Arabic and English language skills among both the academic staff and students, which inevitably affects the production of new

knowledge, books and research, and even the communication of knowledge among academics and students. India has achieved significant progress, in part because it has a large population but also because it has inherited the British educational system that is associated with a great competitive advantage, namely that education is in English. Any book that is published abroad is copied and sold at a cheap price and made available. The English language is an added asset that contributes to education and economic growth in India (PIF1). Today, the English language has become the de facto global language of business, communication, science, research and education. It is a globalisation phenomenon, which has been reinforced by modern information and communication technologies. It is therefore imperative that any higher education reforms implemented respond appropriately to this and place adequate importance on the study of the English language.

On the research aspect of higher education, the findings have shown a variety of concerns by the academics such as a lack of interest in the results of their scientific research, which found no application in society, and the absence of an environment conducive to research. Furthermore, less than half of the academic stated that they had the time to carry out their own research in addition to the lack of funds, facilities, and labs. This may suggest that the knowledge economy framework will not be able to respond to issues of research quality in higher education, since the 'Innovation Systems' indicators of the knowledge economy are concerned with the productivity of research and development such as granted patents, technical journal articles and royalty payments and receipts rather than research environment and facilitation. It is worth noting that less than 39% of academics expressed confidence in their students' research skills.

In terms of resources and facilities, the MoHE projects aimed at increasing accessibility to digital libraries and e-learning resources appear to have failed to reach a significant proportion of students. The lack of digital (as well as non-digital) resources required for research were among the main issues highlighted by students and academics in the questionnaires.

Despite the relatively higher rates of accessibility of learning resources and IT facilities in private universities compared to public universities, the overall ratio

is still quite discouraging and does not indicate any intention to utilise technology for reforming education processes. El Gamal and Aziz (2011) stated a variety of reasons for the students' reluctance to embrace e-learning, such as the absence of a typical university experience as well as asynchronous interaction with and feedback from academics. The findings showed that the university experience including communication and feedback from academics is not appreciated enough among UG and PG students. Considerable portions of UG and PG students received neither support nor advice and were not able to communicate with academics. The educational programmes were not organised or running smoothly. Students were not able express their views and believed that they are not treated with respect within the university. Hence, the current conventional university experience in Egypt could be an opportunity to further explore other modalities such as e-learning.

However, the findings showed that academics play a part in strongly pushing back against the use of the e-learning portal. Making educational material available online for students would have a negative effect on the sales of their academic books, which constitute a considerable source of income for them. While this may have been understandable before the 2011 revolution, the salaries of academics have since increased dramatically, and should not justify such a stance. I would argue that making educational material available online would not only severely affect the sale of academic books, but would also reduce the demand for private tuition. The quality and diversity of online educational resources would increase the level of understanding and awareness among students while presenting challenges to the poor quality academics.

6.4. Student Demand and the Job Market

Assaad, Krafft and Salehi-Isfahani (2014) emphasised that higher education in Egypt is responding to demand for credential rather than skills. The findings showed that while the top reasons for pursuing undergraduate and postgraduate studies in Egypt, namely gaining knowledge and skills, boosting job prospects and seeking a career in academia, may be directly connected to national objectives and priorities, a considerable portion of undergraduate and postgraduate students study for their own leisure, for social reasons or in

connection with their personal beliefs. Hence, a wide range of modalities could respond to this demand (e.g. e-learning). However, El Gamal and Abd El Aziz (2012) believe that credentials are a vital point to assure society and the job market in particular, the value of e-learning programmes.

PIF2 stated that unemployment among university graduates is essentially due to the inadequate economic policy in addition to the low quality of higher education, while economic growth is very slow and not responding to the education system. The findings have shown that less than 23% of academics believe in the importance of higher education and its vital role in development. The decline of the higher education role in development is due to higher education/ job market mismatches as well as the low economic growth in Egypt. From a financial perspective, El-Araby (2011) pointed out that economic growth allows not only more resources for the governments to finance higher education and but also allows for households to share the costs of their higher education.

There is a need to extend the cultural association between higher education and success in life to other sectors of education, e.g. professional/ vocational training, which may be a key for employability. An economic development policy that aims at establishing a competitive economy needs to strike an adequate balance between the supply of both higher education and professional/ vocational education to meet job market demand.

The current inadequate practice of allowing disproportionate numbers of students to study academic subjects which the job market does not need is one of the chief causes of unemployment among university graduates. It should be noted however, that the OECD report highlighted the limited data available on the extent to which degree graduates in Egypt are able to secure employment. It noted that this was connected to factors such as reduced reliance on public sector employment, the lack of communication between employers and HEIs, the absence of surveys indicating graduate destinations and inadequate analysis of rates of return among graduates (OECD, 2010, p. 21). By the same token, Morgan and Wu (2011, p.4) referred to "*the lack of an adequate interface with labour markets to cope with challenges from the high unemployment rate of graduates*", as one of the main constraints to the development of human capital in China.

Moreover, the regulatory framework in place and the limited choices available to students meant, as per the findings, that more than a third of students are not able to study the academic programmes they were originally hoping to pursue. In effect, the current framework fails to meet either job market requirements or student aspirations. It is possible that the increased presence of private higher education providers will partially contribute to solving this issue, since these may end up focusing on subjects that do not require high investment in infrastructure (e.g. laboratories). But once again it will depend on whether the regulatory framework ensures an adequate subject coverage that fulfils the enrolment demand as well as job market and national development needs.

As previously noted in the literature review, Simons et al (2007, pp.396-400) have described the concern among universities that the economic agenda and the need for employability in knowledge economies have been given priority over the public role of the university and its cultural and social responsibility to provide orientation to society. This debate however, is very much linked to developments in developed countries, and not one that is prominent in less-developed countries such as Egypt, where universities have not traditionally played a public role in the first place. Rather, there is a need for such an orientation role and it is one that should be encouraged and preserved.

It is essential for future higher education strategic planning that a clear distinction is made between students' demands, job market demand and social and economic development needs. Higher education must, as Morgan & White (2014b) stated, qualify graduates for the job market while maintaining the quality, relevance and social role of higher education. The creation of a balance between the demands may determine the positioning of higher education as per the conceptual framework of this study. This positioning is a variable and should be responsive to the changes in the demands. To what extent higher education is responsive to demand will dictate how successful higher education will be. The responsiveness to demand may require a sophisticated mechanism that measures not only the demands of students or of the job market but also the emergent needs for social and economic development.

6.5. Role of Higher Education

The academics specified the four principal roles of university as being scientific research, education, community service and qualifying students for job market. The findings have revealed a conflict in the academics' perception of the role of higher education as opposed to professional/ vocational education, and the associated role of academic staff in terms of teaching and research. The mission of the academic staff is not clear, and academics criticised the detachment of theory from practice. The argument that such a detachment exists appears to be supported by a common perception among the officials in different economic sectors that knowledge gained from higher education in most cases is not applicable to real life. There is also a vicious cycle caused by the absence of any industry, which might require creativity, leading to a lack of creativity, which in turn contributes to the lack of creative industry. Where such creativity might exist, it is not used.

Universities were originally intended to be agents of a country's political, social and economic change through teaching and research, yet now their focus has shifted to meeting the needs of the job market. This is a radical shift that was adopted by developed countries, where research is well-established outside of higher education, and was followed by the less-developed countries that have much less established university traditions. Historically, the role of the education system in Egypt was merely to produce employees necessary to feed the bureaucratic and administrative needs of the state (Cook, 1999). The findings showed that the university role of qualifying students for the job market was ranked fourth by academics after research, education and community services, respectively. I do not believe that there should be a conceptual difference between the roles of higher education in a developed country and those in a less-developed country, in particular in today's increasingly globalised societies. However, the role of higher education in a given country should be customised and integrated in a wider national strategy to meet the actual needs of the society. The findings have shown that over 69% of postgraduate and 75% of undergraduate students want to establish their own business. Hence, the main role of higher education should be the formation of the country's leaders, thinkers, innovators and entrepreneurs (SME3 at UNESCO) rather than

restricting this role to qualifying students for the job market.

The higher education sector is perceived to be a matter of national pride, and its role can be extended to stimulate the reform of pre-university education. But pressure on governments to deal with the employability issue prompted a rethink of the purpose of the university and its role, rather than actuating the role of other education sectors such as technical, professional or vocational education. The idea that the more we have higher education, the better it is for country's economy, as recommended by the OECD, is a myth. There are many countries that traditionally have a very high rate of higher education such as ex-Soviet Union countries (e.g. Kazakhstan) and many other Central Asian countries. However, the employability issue is still not resolved. Rather, it leads to an inflation of higher education degrees where, as mentioned earlier, taxi drivers may have higher degrees (The SME1 at OECD). So the discussion about the relevance of higher education to the job market, especially in less-developed countries, should always be associated with a discussion on professional/ vocational education. By the same token, the issue of equality and growing number of eligible youth for university should be tackled not only by MoHE but also other ministries of social affairs, labour, youth and planning.

Higher education needs to be adequate, fair and harmonious, that is, the graduate needs to have received a good education. The goals of higher education can be derived from the national goals, and be generally similar to them. The national goals would include justice, competence and harmony among citizens. Transferring these goals to higher education should be seamless and can be achieved by improving the quality of education, improving the allocation of financial resources, guaranteeing jobs for graduates, and abolishing the duality which is seen as being present in the nation's higher education (PIF2).

Higher education institutions, and universities in particular, are the places where values of a given society, such as freedom of speech, democracy, critical thinking, citizenship and any other values that are linked to a specific society, are nurtured. Higher education reforms have taken place in totalitarian societies (e.g. Russia and China) that have their own value system which differ greatly from Western values, and still, universities have maintained their importance in

preserving society's values and forming leaders and thinkers. In that sense, a serious discussion needs to take place across all sectors of Egyptian society to identify the core societal values to be associated with the role of higher education, and consequently to be reflected in a reform plan. It is essential for the university to maintain its role as custodian of the societal values, forming leaders and thinkers on the basis of such values. Hence, reforming higher education within the wider knowledge society framework rather than the knowledge economy framework will maintain the country's identity in the global competitive economy.

As previously noted, UNESCO (2005, p. 87) has pointed out that in the absence of balanced policies related to the funding of higher education, less-developed countries with a less established higher education tradition are most at risk of the commoditisation of higher education, which could distort the original mission of universities and reduce these countries to the role of consumers.

The proposed conceptual framework (reconciliation of state, society and market) is flexible enough to maintain the societal values when reforming higher education, since the society dimension is concerned with the role of higher education and balancing public good vs. private good.

6.6. Private Higher Education

The duality of private and public education in Egypt is a significant issue in the higher education system. The findings revealed a clear discrepancy between private and public university students' satisfaction with the quality of education and job prospects. As noted in the Literature Review, the massification of higher education has led to a higher education system where there is a rift between less adaptable universities depending on a shrinking public-funded sector, and more enterprising universities developing commercial partnerships in e-learning and knowledge transfer (Williams 2007, p. 511). A similar phenomenon has impacted the Egyptian higher education system, where private higher education has expanded to complement public efforts to cater for unplanned enrolment growth. However, the business model of private universities in Egypt has relied almost exclusively on student fees (OECD, 2010, p. 266). There are no non-profit private universities, nor are the existing for-profit universities governed by

any proper regulatory framework that developed within a wider national strategy for social and economic development (the most recent national strategy for higher education was in 2000). The existence of numerous private universities under such conditions and the resulting changes in the role, organisation and provision of higher education is likely to have had negative consequences on the social fabric, and economic and social justice.

While the number of higher education graduates in Egypt may be appropriate for the population size, the findings showed that their geographical distribution may not be appropriate. Some governorates completely lack private universities and higher institutions, while others lack both private and public universities.

Despite the relatively higher performance and the better perception of the private universities in Egypt compared to public universities, many private universities have not applied for accreditation due to the complexity of the processes. However, OFF1 believes that private universities are capable of overcoming the problems since they have a solid infrastructure coupled with a small number of students and good funding. SME3 (at UNESCO) emphasised that governments have a key role to play in regulating private providers and ensuring that programmes are accredited in order for degrees to be recognised. However, within the current higher education and job market mismatches, higher education needs to respond to the required skills by job market rather than demand for credentials (Assaad, Krafft and Salehi-Isfahani, 2014). The findings have shown that less than 36% of undergraduate and 41% of postgraduate students believe they are capable of competing in the job market after graduation, whereas less than 16% of academics believe that the acquired knowledge and skills by student would allow them to compete in job market.

The private provision of higher education is starting to increase in less-developed countries and is essentially focused on disciplines like business administration and public relations, which are needed and contribute to national development, according to SME3 (at UNESCO). However national development also needs other disciplines, such as physics and biology. A well-crafted regulatory framework would lead the provision of private higher education to meet the national strategic goals. Yet governments may not be strong enough to do so, and at the same time, having these universities calms down the

clamour for access to higher education. Hence, a government may turn a blind eye just in order to meet a target of matriculated students. SME3 (at UNESCO) believes that there is room for both public and private universities, and to the extent that private providers can lessen the pressure on the public system, this may allow for a reallocation of funding and resources to strengthen certain subject areas. However, Buckner (2013) emphasised that despite of the expansion of private universities between 2000 and 2005, they serve only 2.5 percent of all Egyptian university students.

Expanding private higher education would be a solution for relieving the pressure on the public system in less-developed countries, yet this may differ from one country to another, subject to the political and historic context of each, which may have a severe impact on the sustainability of the higher education development as well as equality and social fabric of a country. Diversification of private higher education to include non-profit private universities may counterbalance the inequality of access to for-profit private universities.

In Latin America, attending university is considered a human right. The decision to allow for-profit universities is enough to bring students onto the streets: one government in Chile and another in Colombia were forced out of office for that reason (SME2 at OECD). In post-Soviet countries, on the other hand, the expansion of higher education is not a major issue, however, quality is an issue as is the lack of demand for graduates on the job market. The job market there is detached from what universities do (SME1 at OECD). The question of how higher education, whether public or private, should meet students' demands while meeting the demands of the job market is a complex one.

There have been successful examples around the world of expansion in private universities such as Portugal (Mediterranean), Côte d'Ivoire (Africa) and Iran (Islamic) to represent 30%, 40% and 30% of the total student population, respectively. In other countries, which have a tuition-free public university system (e.g. Nigeria), the growth of private universities has been much slower: "*After five years on the landscape, private universities in Nigeria do not account for as much as 5% of total university enrolment*" (World Book, 2002, p. xxiv cited in Jibril, 2004, p.134). This is similar to the case of Egypt where private universities currently account for less than 4% of the total student population.

Another successful example is South Korea that mostly relies on the private sector in higher education provision. In the mid-1970s, about 7% of the relevant age group were enrolled in HEIs. By 2002, one million students were enrolled in 159 two-year technical colleges, of which 143 were private institutions that account for 95% of the students. At the same time, there were 2 million students enrolled in 193 four-year technical and academics universities, of which 159 were private institutions (Kim and Lee, 2006). About three quarters of university students were in private institutions. An extremely tight regulatory framework supported this landscape of private higher education expansion and balanced between academic and technical higher education.

In Egypt, the issue is not so much the expansion of private higher education, but rather an inefficient public sector that is not able to establish a good regulatory framework or a sound strategic plan based role of higher education in Egypt. The most recent national higher education strategic plan of 2000 does not envisage an expansion of private higher education. However, the findings have shown that the current constitution of 2014 signals, for the first time, the state's interest in expanding private higher education and stresses the government's responsibility towards the quality of higher education.

There are risks involved when a certain model is adopted in a less-developed country for reforming higher education in line with the World Bank's or OECD's views. Some of these countries do not have the tradition of higher education established yet, so expansion of private universities and students' enrolment in the absence of a strong regulatory framework may run commercialisation and polarisation/ plurality risks and would not help consolidate the national development vision.

Private higher education may also encompass both for-profit and non-profit providers. It is solely the government's decision to adopt the most appropriate model for private higher education. There are countries that have made the conscious decision to allow both profit and non-profit private universities. Bolivia, for example, made a decision to accept both, following a big debate in the eighties and early nineties when the country was expanding universities, including private providers. Subsequently, a number of newly created universities were for profit, with limitations as to how they could invest the profit,

while others were non-profit, which meant they were exempt from taxes. It was up to the founders of the respective universities to decide which way to adopt. The government made an informed decision to let the private providers choose their status (SME3 at UNESCO). Opening up to private higher education in Bolivia was accompanied by strong quality controls and limitations on the fees that private universities could charge. It is therefore the regulatory framework which is the key to reforming higher education, rather than the model for reform.

The expansion in private universities should however not be developed as an alternative or a solution for the low-quality public universities. The dramatic decline in the quality of public universities is leading to the expansion of private universities that are consequently benchmarked against a low quality public higher education. The findings have shown that less than 34%, 27% and 22% of UG students, PG students and academics respectively believe that public universities offer good education. The current implicit government strategy of utilising the declining quality of public higher education to push towards expanding private higher education is damaging and may result in the collapse of the entire higher education system, while increasing the gap between graduates' skills and job market requirements due to the nature of the set of skills and knowledge offered by private universities. The implications for the economic development of Egypt would be disastrous.

6.7. Government Intention

As pointed out in section 3.8 (Knowledge Economy and Knowledge Society Frameworks) a considerable margin of freedom, transparency, accountability, tolerance and political openness are needed to ensure the transition towards a knowledge society that is supported by an articulated political vision and strategy (Olssen and Peters, 2005). Hence, it was necessary to explore the intention of the government towards the reform of higher education among other priorities in the current complex political and economic situation, and to look for indications that reflect the government's intention. The government has a crucial initial role to play in regulating the higher education system to ensure relevance, quality and inclusiveness. Such a role requires a balanced strategy between the diverse purposes of higher education, a strategy that is based on a clear vision for economic and social development. In spite of the high

expectations after the 25th of January revolution, the findings have shown that less than 27% of academics believe that there is a political will to reform higher education and less than 24% believe that reforming higher education is at the top of the government's priorities. On the other hand, PIF2 confirmed that the recent political changes in Egypt had no impact on reforming higher education because "*for over two years, the new regimes, whether the military or the Muslim Brotherhood, have been occupied with other matters. There has been no reform, nor even any deterioration, except for the fact that the deterioration in security, economy and politics will necessarily affect higher education in an indirect way*".

Indeed, higher education does not appear to be on the priority list of the current regime; despite the fact that the financial allocations for education (including higher education) over three years are increased so as to reach 2% of the GDP by 2016/2017, in line with the recent amendments in the constitution (articles number 18, 19, 21 and 23) that declare health and education as established rights for all Egyptians. On 29th of June 2016, the parliament passed Egypt's 2016-17 general budget that failed to comply with several constitutional articles that ensure a minimum level of expenditure on education, scientific research and health. The government did not offer an explanation of the discrepancy, nor did it present a plan to adjust the budget to fulfil constitutionally required expenditure levels (EIPR, 2016). Article 238 of the transitional and general provisions of the constitution passed in 2014 states,

"*The state shall gradually implement its commitment to the allocation of the minimum government expenditure rates on education, higher education, health and scientific research that are stipulated in this constitution as of the date that it comes into effect. It shall be fully committed to it in the state budget of the fiscal year 2016/2017*"

On the other hand, most of the additional financial resources allocated in the national budget of 2014/2015 went on increasing the salaries of the academic staff that had been already increased dramatically in the previous two years. According to the MoHE (the Higher Education Development Programme), there is no proper strategy for higher education yet. In other words, increasing the academic staff's salaries was made outside of the context of a national strategy

to reform higher education in Egypt. Despite the markedly high increases in the academics' salaries, these are still strongly pushing back against the use of e-learning portals (OFF2), which would negatively affect the sale of their books. On the other hand, the raise in academics' salaries without a proper economic policy will not have much long-term impact, since inflation will eventually make the increases worthless.

OFF1 pointed out the new strategy to develop higher education is yet to be implemented. It appears that the current instability on the political and economic scene, which has seen four different ministers of higher education since 2013 **(**OFF2), will relegate reform of higher education further down the government's agenda. Despite the initiatives taken towards improving the quality of higher education, there does not seem to be a clear vision or strategy for higher education in place.

OFF1 pointed out that pre-tertiary education comes at the top of the state's priorities. The 2014/2015 allocated budget for pre-university education is 94.4 billion Egyptian pounds (7.9bn GBP, at July 2015 exchange rates), compared to 5.2 billion Egyptian pounds (433m GBP) for higher education (Damyan, 2014). Expenditure on higher education is just over 5% of the overall expenditure on education.

It is recommended by the World Bank that between 15 and 20% of the total education budget should be devoted to tertiary education, with 4 to 6% of gross domestic product (GDP) spent on education (World Bank, 2002, p. xxiii cited in Jibril, 2004, p.135). These figures are consistent with actual expenditure statistics reported by the OECD and other countries with high investments in education (UNESCO 1999). The United States spent 5.4% of its gross national product (GNP) on education in 1994 while Canada, the United Kingdom and Germany spent 6.9%, 5.3% and 4.8% respectively around the same period. Education also accounted for between 8.4% (Germany) and 14.4% (USA) of total expenditure in those countries in the same period. Thus, countries such as Nigeria, which spent only 0.7% of its GNP on education around the same period, and Egypt (1.0% as 2007), are clearly under-spending on education and therefore under-investing in their future. Public spending on higher education in Egypt is less than the average of both other Arab countries and Lower Middle

Income Countries, whereas combining both public and private spending results in an average that is similar to other Arab countries. However, expenditure on higher education per student relative to per capita income (in PPP 23.4%) shows that Egypt falls far behind the other Arab countries according to this indicator (El-Araby, 2011). Hence, expansion of private higher education (currently less than 17% of the total enrolment) will dramatically contribute to the overall expenditures on higher education, since public resources are inadequate even with the recent constitutional legislations. As per the 2014 constitution, expenditure on pre-university education is to increase over three years (2014 – 2017) to reach 4% of GNP, while expenditure higher education is to reach 2% by 2017.

As noted earlier, the challenges encountered by Egypt's reform programmes, and their limited impact on the ground, have driven the Egyptian government to invite the OECD and the World Bank in 2010 to conduct a review of the higher education system and to present options for immediate and long-term policies towards reforming higher education (OECD, 2010). Since the submission of the report, a series of events have resulted in political, economic and social instability, which got in the way of the implementation of reform. New initiatives by the MoHE reflected a conflict of priorities and bias towards a political agenda.

It may not be feasible under the current political and economic crisis in Egypt to allocate adequate public funds for a comprehensive higher education reform. However, if there was a real intention for reform, one should expect to see a strategic plan, a regulatory framework, new policies or least for the issue to be opened up for a societal debate. The findings have shown that over 62% of academics believed that there are possible routes to reforming higher education without securing enormous investments. The expectations were high after the 25th of January and Egyptians were willing to work hard for their future. As mentioned above, only less than 27% of academics believe that there is a political will to reform higher education.

6.8. International Organisations

The massification of higher education is a general global trend supported by the OECD in order to make higher education available as widely available as possible (SME1). This liberal approach is adopted by the OECD on the assumption that nations can impose proper control through sound regularity frameworks, which underpin markets.

The OECD projects with governments are based on an analytical framework designed to understand the overall governance structures and utilise experiences from various contexts. This analytical framework makes it possible to group countries by overall governance models. For instance, Australia, UK and Uganda may be classed within the same group based on the governance structure, regardless of the performance. Senegal and France are more likely to be in one group, while Russia, other ex-Soviet Union countries and some Eastern European countries would be in the same group.

There are noticeable similarities across OECD country reviews, such as the Higher Education in Egypt report, to the extent that it may be hard to identify the country in question. SME3 justified this by saying that the OECD reviews at that level need to draw on similarities rather than the differences. However, the context is crucial - whether the social, historical or financial context, or even the development context, since universities are instruments for governments to achieve development goals.

The OECD's remit is the provision of recommendations, which are based on an analytical framework for consideration by the concerned country. This is in contrast to that of UNESCO. It is therefore not part of the OECD mandate to follow up the implementation of recommendations. This kind of follow-up may however lead to lessons learned. Different countries with diverse contexts may respond differently to the recommended actions. An international organisation's mandate is guided by the countries on the organisation's council, and usually these countries do, to a great extent, determine its agenda. There is a competition among international organisations to achieve their goals, which are directly connected to the funding of their projects, apart from the competition for their share of international influence.

As is the case with other international organisations, the OECD strives to convince the member countries to make longer term commitments to its projects. Yet this is hampered by the fact that political mandates are limited to a small number of years (e.g. two, three or four years). The pressure is on those projects to justify the investment by delivering some results within this limited period (SME2). The real challenge for the less-developed countries is continuity because of the time frame of the political mandate, which is not sufficient for long-term development.

Until the last decade, the World Bank leaned towards lending money for basic education rather than tertiary education, discouraging the less-developed countries from prioritising higher education in favour of basic education (Jibril, 2004). However, more recently the focus has shifted towards tertiary education. Meanwhile, it is anticipated that northern nations – specifically Europe – will need to import a large proportion of its workforces from the south in the coming decade (e.g. south Mediterranean countries), and it is therefore in their interest to ensure these immigrant workforces are adequately qualified (OFF1). This may justify the shift in the World Bank's focus, in terms of funding education reform projects in the less-developed countries. UNESCO's approach, on the other hand, distinguishes itself in that it looks at higher education within the continuum of the overall education system (SME3).

International organisations should be expected to have a balanced regional perspective within a global context, which individual countries may sometimes not have. However, the World Bank's lending for tertiary education for the decade 1990-2000 was in favour of East Asia and the Pacific Region (which received 38%) and Latin America and the Caribbean (which received 33%). The least favoured regions were South Asia (5%), the Middle East and North Africa (5%) and sub-Saharan Africa (7%) (Jibril, 2004, p.136).

OFF1 believes that the implementation of mutual educational programs nations between the EU and countries south of the Mediterranean is the result of a shared rationale and interest in education. Reforming higher education with an eye on exporting workforces may have a great impact on sustainable development in Egypt, with an organised brain drain providing a qualified workforce that meets the need of the European rather than the Egyptian job

market. Thus, discussing the role of universities is crucial before any attempt to reform higher education.

While international organisations are becoming more responsive to the needs of the countries they fund, it is also true that their research and recommendations are often guided by their agenda and investment considerations, which may not coincide with the country's needs (SME2). The role of an international organisation is altered according to the allocation of funds to certain areas and the competition, whether internally or externally, with other international organisations. Hence there is a considerable overlap in the role of these organisations.

An international organisation's approach when working with non-member states differs from working with member states. As SME2 stated, there is much more freedom when dealing with non-members. This may put off the less-developed countries, as the findings are not written with consideration of what the country in question wants to hear, and recommendations are not always feasible, hence sometimes the findings are completely ignored. There is much more sensitivity involved when dealing with member states on issues of education, as these countries often reject criticism to evade political backlash.

There appears to be a conceptual conflict in the role of international organisations, such as the OECD, when they review the performance of higher education in a member state, between serving the political purpose of the member state and presenting solid substantive recommendations.

While developing countries may be more flexible in their willingness to reform education than developed countries with long-established higher education traditions, they may often be too flexible in this respect, and as a result completely change all aspects of the existing system without considering any beneficial components that should have been preserved (SME1). As has been noted in the literature review, the adoption of externally developed models can lead to isomorphism (King, 2011). This is likely to present constraints in the case of less-developed countries, as such models are unlikely to take account of a country's unique socioeconomic and cultural setting.

It was clear from the OECD report that such a proposed reform model is not comprehensive, since it does not consider Egypt's political, social and cultural setting. Instead it deals with certain aspects of the reform, namely the economic aspect of higher education. However, I believe there should be an ethical obligation on the part of international organisations which conduct such a review, to explicitly state its limitations, rather than introducing it implicitly as a comprehensive reform of higher education, and protecting themselves by defining the concerns of the review in the Caveat section as 'investments in human capital and the knowledge base' and 'open trade and export-market development'.

As noted in the Literature Review (see Section 3.6.2, 'The OECD Report 2010'), the 'Foreword' section of the report stated that the overall aim of the review is developing Egypt's human capital, rather than explicitly stating that it is the reform of higher education.

International organisations such as UNESCO and World Bank differ from each other in terms of their objectives, their mode of work and their missions, even if SME3 expressed her belief that that they all have the best interest of the country at heart. PIF1 meanwhile stated that reform requires the loyalty of those working within international organisations to the country, yet in reality they are employees whose job it is to write reports. Hence, it is the country's responsibility to carefully evaluate all international organisations' recommendations and to only implement those which are aligned to its national strategic plan.

The funding of development projects such as higher education reforms in a certain country is defined in the mandates of a limited group of international organisations such as the World Bank. UNESCO's mandate is distinct, as it focuses on the provision of frameworks and guidelines (SME3).

The World Bank perspective is that the development gap between developed and less-developed countries will continue to widen since 85% of all R&D expenditure in the world is funded by member states of the OECD, while China, India, Brazil and the Asian Tigers are responsible for 11%. The contribution of the rest of the world stands at 4% (World Bank, 2002, P. 9 cited in Jibril, 2004, p.134). Indeed, increasing the less-developed countries' share of the world

expenditure on R&D would narrow the funding gap. However, it is more likely that the development gap will be maintained due the competitive pressure supported by modest economic growth in the less-developed countries. A possibly more realistic vision that promotes and advances training and vocational education would have a direct and high impact on economic growth, while identifying and strategising the local R&D needs outside of the world competitiveness framework. Hence, the proposed conceptual framework for reforming higher education is more appropriate for less-developed countries designing their own model of reform that is responsive to context, whether social, political, historical, economic, or cultural context at different levels (state, society and market). The conceptual framework (Section 3.9) should allow countries to evaluate recommendations by international organisations against the parameters of the three framework dimensions.

The World Bank states in its report 'Constructing Knowledge Societies': "*The bank has been less successful in supporting the implementation of politically sensitive reforms such as moving from negotiated budgets to formula funding, reducing subsidies and introducing tuition fees*" (World Bank, 2002p. 106).

6.9. Reform of Higher Education

The OECD recommended that Egypt undertake structural reforms, such as the modernisation of technical and vocational education institutions and increasing the number of private institutions, and making greater use of online and mixed mode learning, with the aim of expanding enrolment to accommodate the growing youth population and student demand. It further recommended that that research capacity should be strengthened in order to improve the country's competitiveness (OECD, 2010).

Reforming higher education in Egypt, especially given the accompanying expansion, will be associated with certain challenges, such as efficiency versus quality, provision versus regulating, financial considerations with equity, local relevance to global standards and leadership qualities.

One of the major impacts on the reform of higher education is the brain drain of well-educated workers. The findings have shown that more than 69% of PG and 70% UG students are keen to find a job opportunity abroad. There are no

numbers to reflect the size of the brain drain in Egypt. Yet it is worth mentioning that up to 30,000 African PhD holders live outside the continent and that up to 130,000 other Africans are studying abroad, many of whom may also fail to return home after their studies. The challenge to the Egyptian government is how to establish the appropriate living and working conditions to retain the nation's skilled professionals and to attract back those who have migrated elsewhere (Jibril, 2004). However, it is unlikely that highly skilled Egyptians who work abroad will return in the short-term and counterbalance the brain drain. This is not only because of the poor political and economic conditions, but also because they are often perceived as threat by both the state and society with their beliefs in human rights, freedom and the role of science in liberating minds. To deal with the effects of the brain drain, the 'Net Knowledge Inflows' dimension of the knowledge society (see Section 3.8, 'Knowledge Economy and Knowledge Society Frameworks") is concerned with the dissemination of diversified knowledge that may result from foreign investments or immigration. This dimension may form an opportunity to bridge the knowledge of the Egyptian human capital abroad by infusing and channeling this knowledge via telecommunications networks. Human capital needs to be formed within the country and the reforming model needs to be sustainable to minimise the impact of the brain drain on Egypt.

On the other hand, there is a consensus among academics and students on the wide split between scientific research and its application, which might be beneficial to society. Given the overwhelming social, economic and political problems that less-developed countries face, investment in R&D may need to be directed to locally/ regionally relevant research that produces Mode 2 problem-solving knowledge (see Section 3.4.2, 'Production of Knowledge') for a greater exploitation of vocationally-oriented knowledge.

Globally, the production of Mode 2 problem-solving knowledge has been occurring outside the realm of universities. However, due to the fact that less-developed countries do not have the capacity yet to produce knowledge outside of universities, this could present an opportunity for universities to adopt Mode 2 knowledge in Egypt. The production of such knowledge, which is locally/ regionally relevant, may need to be adopted within the university research

framework to have the maximum impact on development.

The knowledge society would be an ideal framework for reforming higher education in Egypt, since the 'Research & Development' dimension of the knowledge society is concerned with the programmes that tackle the problems and pressing issues of society. It may also tackle the issue of lack of appreciation and confidence in science as per the discussion in section 6.10.5 (Cultural and Social Perceptions).

From an investment perspective, since less-developed countries account for only 4% of the world's R&D expenditure (World Bank, 2002 cited in Jibril, 2004), it may be sensible for these countries to focus their investment on locally oriented research within universities, as these efforts would have a tangible benefit for economic growth and respond the needs of the job market rather than dilute their investment on just-in-case research (propositional knowledge Mode 1). Hence, the research framework at the Egyptian universities may need to be reformed within a wider national strategy for R&D.

Entrepreneurship education has been highlighted as representing a fundamental shift in traditional teaching, learning and assessment processes, an approach which would allow students to become active learners and would transform Egyptian universities into enterprising institutions (Kirby & Ibrahim, 2012). As such, it could be considered one of the priorities of higher education reform, especially with more than 75% of undergraduate students and more than 69% wanting to establish their own business. It is worth mentioning that 45% of European Union 15–24-year-olds prefer to be self-employed (CIPD, 2015).

When it comes to financial resources, over 62% of academics believe that there are possible options for reforming higher education without the need to secure massive financial resources. However, PIF1 believes that reforming education is all about the cost rather than programmes. "*There are no shortcuts for developing education without cost. The shortcuts are the intelligent implementation, but after the provision of the financial means*". He gave the example of the model schools, which, when the concept was established, were meant to remain a high-level model, representing 5% of schools at the start, then 10% after 5 years and so on. But due to the lack of financial resources and

the desire to increase their numbers, the quality level in all model schools soon dropped. By the same token, the expansion of private HEIs (privately funded) in the absence of a successful model of quality public HEIs to form a benchmark will not necessarily deliver quality education.

Expansion of higher education does not necessarily need to be publicly funded if the government opens up to private higher education. However, a solid regulatory framework that is associated with quality assurance by an independent agency is crucial to in order to steer the expansion. It is anticipated that other actors (e.g. international universities) will establish their offshore campuses with local partners anyway. Prior to that an informed decision needs to be taken by the government, on whether to open up to non-profit private institutions only or to for-profit private institutions as well. Tax legislation will also need to be aligned to reflect that decision. The regulatory framework should allow the government to steer the stream of students to meet the strategic objectives of the government.

SME3 (at UNESCO) emphasised that the reform of higher education has to be developed within the social, political and economic context of a country. Understanding the context is crucial in order to determine the appropriate model for reform. The state-centred model is quite common in the less-developed countries. However, in the last 50 years there has been a shift from the state-centred model to the liberal model, which has been accompanied by reforms. Africa is the most recent example after Latin America, where massive reforms happened 30 years ago. A recommended approach for less-developed countries would be one that moves along a continuum between both models, taking into account parameters such as finance, administration, expansion of enrolment, equality and curricula. The challenge for a country is to position higher education in consideration to all relevant parameters.

When applying the conceptual framework of reforming higher education to the expansion of higher education with a consideration to equality, a balance needs to be maintained at the state level between the provision and regulation of higher education. In other words, maintaining the balance between public universities and private universities along with the geographical distribution. The society and the market dimensions provide parameters for such a balance. For

instance, an expansion of public higher education in less advantaged societies (e.g. South of Egypt governorates) is considering higher education a public good rather than a private good and consequently balancing higher education as a human right against being an investable commodity. While an expansion of private higher education in advantaged societies (e.g. Greater Cairo, North of Egypt governorates) is considering higher education a private good rather than a public good and consequently balancing higher education as an investable commodity against being a human right.

This conceptual framework offers an umbrella that combines all pertinent issues to reform higher education. It can also be applied to students' demand for higher education and job market outcomes, among other parameters, within the framework of a national strategic development plan, to provide a hybrid model for reforming higher education that fits socio-cultural realities of a country as well as its development goals. Most of the research that contributed to reforming of higher education in Egypt (e.g. Assaad, Badawy & Krafft, 2014; Fahim & Sami, 2011; El Gamal & Abd El Aziz 2012; Buckner, 2013; El-Araby, 2011) fell into the trap of the international organisations framework and dealt individually with these parameters with an aim to prove their viability rather than adopting a more holistic approach to the reform issues. It was not necessary to either accept or to decline the expansion of higher education based on one or two parameters in isolation from the overall context. Hence, it was crucial to develop this conceptual framework for reforming higher education.

Within the current social and political context in Egypt, it may be feasible to take formative actions in terms of reforming higher education; however, the economic situation may not allow these actions to be backed up, bearing in mind that political stability is a major requirement for sustainable development. An overall vision for a knowledge society may be a prerequisite for reforming higher education in a wider context than knowledge economy, along with a systematic reform of education from early childhood, starting with the home, followed by primary education, to form minds for the future.

Reforming higher education in Egypt could be successful subject to a well thought out regulatory system that would be integrated into a wider national development strategy. There are two major barriers to the establishment of

such a system. The first is the political will to reform higher education that will require further reforms in other sectors, mainly the public sector, the economic sector and the legislative sector. The second barrier is a cultural and social barrier, such as the lack of trust and the domination of religion over sciences.

PIF2 pointed out that the reform of higher education needs time. "*Don't expect education to be reformed within three or four years. You can start from tomorrow, and that's the optimistic side. If you start from tomorrow, people can sympathise with you and the ball will start rolling*". Building trust with society is essential for a successful reform to support the implementation phases and acknowledge the results. He emphasised that the reform of higher education needs to be undertaken among the other required reforms in various fields, particularly the political and economic fields, and this would have immediate benefits for higher education.

Reforming higher education in Egypt does not mean reforming universities only but also other institutions that provide other types of higher education. Diversification of higher education systems will allow for the existence of a wide spectrum of institutions that may include technical institutes, community colleges, polytechnic institutes, life-long learning universities, open universities, virtual universities, franchise universities and corporate universities. Hence, the conventional university will no longer be dominating the tertiary education systems (Jibril, 2004, p. 134).

6.10. Prerequisites

In light of the issues identified in the findings, the most carefully designed reform initiatives may not be achievable in isolation from their economic, political, social and cultural context. As Morgan and Wu (2011, p.7) emphasised that a high priority should be given to "*interdisciplinary studies to provide a whole picture of the dynamics, constraints and potential of higher education development, alongside conventional educationalists and economists*".

The prerequisites pave the road for a successful customised reform model, provided that they are given equal priority. It should be noted that economic growth and public sector prerequisites are falling exclusively within the remit of

the ‘Economic Incentive and Institutional Regime’ component of the knowledge economy framework.

6.10.1. Political Stability (including democracy)

As per the findings, the vast majority of academics surveyed believe that freedom and democracy are essential for higher education reform. Meanwhile a large proportion stated that they do not trust post-revolutionary governments in Egypt to have the political will to implement reform.

Political reform is indispensable for the reform of higher education, as is political stability and commitment on a long-term scale. This may however be quite independent of whether or not freedom and democracy are embraced (Schiffbauer & Shen, 2010). There have been higher education reforms in totalitarian societies that are based on value sets that lack freedom and democracy. However, as PIF1 stated, there needs to be more awareness about the true nature of democracy, which is more than a simple rule of the majority. A democratic society is one that respects human rights and liberties. In that sense, it should be expected that a reform of higher education in Egypt can bring about true democracy.

Freedom and democracy may indeed be an output of the political movements that come out of universities. During the seventies and eighties, many of the movements, which came from universities, were cracked down on by repressive regimes, such as in South Africa, Nigeria and Ghana, as well as in several South American nations (SME2 at OECD). However, freedom and democracy may occasionally become a barrier to reform of higher education when there is a lack of trust and of stability, such as in the case of Colombia, where a progressive law on higher education was opposed and rejected out of hand by the student movement, due to lack of trust and lack of political stability (SME1 at OECD).

Abdul Rahman Al-Kawakibi (1902) believed that education gives the learner a critical perception. In his opinion, educated people are a nuisance for the ruler, because they refuse to remake themselves in his image. The values of freedom, democracy and respect for human rights should therefore still be regarded as desirable components of any society wanting to progress in any

industry. Within the context of the 'Human Rights & Freedom' dimension of the knowledge society framework – which is alien to the knowledge economy framework - the citizenship rights are essential for human development and empowering citizens.

In addition to the impact of the economic and social situation on the reform of higher education, political stability and long-term commitment is essential for sustainable reform. The general political climate affects the spirits of both academics and students (PIF2). The Arab Spring and all associated political events will have had clear implications on the performance and development of higher education (SME1 and SME2 at OECD). Hence, the core element for development is stability and high investment in education and infrastructure, both of which have not been available under the conditions prevailing in Egypt since the January 2011 revolution. A reform model for higher education may not necessarily embrace freedom and human rights, however it may be a necessity for a sustainable reform of higher education under the current conditions of political instability in Egypt.

6.10.2. Economic Growth

The availability of financial resources, whether from public or private resources, is essential for reforming higher education. A fast economic growth would allow more resources for the government to finance higher education as well as for households to share costs of their higher education (El-Araby, 2011). The high rate of unemployment among university graduates is not only due to the mismatch with the job market, but also the low performance of the economy (PIF2). Furthermore, expansion of higher education in light of the current slow economic growth will obviously have an impact on supply and demand. Higher education graduates may face unemployment after graduation, or accept a lower rank or salary job in best-case scenario, which will have knock-on effects for college and secondary school graduates (Li and Morgan, 2008).

A sound economic policy would ensure enough jobs are created to satisfy the number of graduates every year, along with realistic minimum wages, since there is no point in employing a graduate who cannot afford the most basic human needs. Having said that, it is not up to the government alone to create

more jobs. The economy has been privatised to a great extent and the public sector labour force has been reduced to some extent and it is expected to be reduced even more with the recently proposed civil service law. Economic reform is therefore indispensable for the reform of higher education, where higher education is reformed within a wider national economic and social development plan.

6.10.3. Public Sector

Higher education should also be seen within the context of the wider education system. The low quality of education is often associated with the educational level attained by students in previous stages. Hence, a sustainable reform of higher education cannot be attained in isolation from a reform of preceding stages, primary and secondary education.

A higher education reform strategy needs to be developed within a wider national development plan. This mechanism may require a high level of integration and coordination with other public sectors. At the same time, reforming higher education will require social pressure on and willingness on the part of the government and HEIs. Public sector reform is an essential prerequisite for reforming higher education, as it is the public sector that controls and manages regulations and legislation.

While the availability of financial funds is essential, it is crucial that a comprehensive higher education reform addresses aspects such as the role of higher education in social and economic development, the co-existence of private and public education and the twin strands of academic and technical education. Nevertheless, evaluating the current system for financing and allocating resources would be a prerequisite for reforming higher education too.

6.10.4. Trust and Shared Values

Fukuyama (1995) demonstrated the impact of social capital on national development by identifying the level of trust among the largest firms in a series of national economies. He argued that a country's economic development can be affected by the level of trust inherent in its national culture. High levels of trust can lower transaction costs, leading to a more efficient market and thus a more prosperous economy, while lower levels of trust lead to higher transaction

costs which restrict market activity. By the same token, low trust in HEIs and among the stakeholders would have a great impact on the educational process in terms of transaction cost that is required to produce high quality output. As PIF1 pointed out, one of the major impacts on the reform of higher education in Egypt is the lack of trust, which has its root in political issues. He noted that successive rulers denigrated each other's achievements, thus *"not only distorting the past but also the meaning of government*". As a result, people lost trust in their institutions. It is true that institutions need reform, but that does not mean that they are a complete failure. Maintaining the belief in the institutions and a sense of belonging for HEIs is crucial for the reform of higher education and for further developments. Establishing a new higher education system from scratch in such a large country as Egypt, if it were an option, may end up not being better than the current system. Educational institutions may need reform, however this does not mean diminishing their traditional and historical role and contribution to society. Restructuring a set of shared values, whereby knowledge and science as well as educational institutions are highly regarded, is a prerequisite for a successful reform of higher education in Egypt. A tailor-made strategy for reforming higher education, which addresses the distinctive Egyptian cultural and social policy, its history, culture and geography, its competitive advantages, and which is based on sound economic policies, would contribute to the success of the model.

6.10.5. Cultural and Social Perceptions

Other aspects that are essential to address include duality, bias and discrimination, which exist not only between private and public education but also between academic and technical education, and religious and non-religious education. Furthermore, the findings have shown various issues pertaining to ethics and values among the stakeholders, such as favouritism, respect and trust. Over half of the students believe that students are not treated with respect, whereas over one third academics believe that academic staff are not treated with respect.

On a different note, one of the major impacts on the reform of higher education is the 'religious' approach to life by Egyptians, which, as PIF1 explained, means that religion is given the role of interpreting all aspects of people's lives.

Mansour (2015) demonstrated that the majority of science teachers in Egypt believe that scientific research should be guided and conducted within the cultural beliefs of society, traditions and morals. However, while faith brings confidence, which is the cement for society to build itself, it also undermines confidence in science (PIF1). The Qur'anic verse *"And mankind have not been given of knowledge except a little"* (Israa 85) may explain the lack of appreciation for science among a considerable portion of the society, and the view that the Qur'an is the only source of science needed, and that there is therefore no need to study or conduct further research. Within the context of inquiry-based learning for teaching science, Mansour (2015) emphasised the significance of exploring the relationship between scientific research and religion within Egypt. He argued that this relationship needs to be examined within the cultural context of the country rather than a generalisation that is based on experience somewhere else. Hence, the concept of science needs to be re-established not only within pedagogical context but also within the Egyptian society, and to be recognised as an intellectual tool to convey thoughts for the prosperity of human being.

A transition in how religious authority is viewed is likely to be needed in order to build more confidence and appreciation for science. It should be emphasised that the provision of financial means without consideration of cultural and social issues in Egypt may not have the desired effect, especially on the social and cultural development.

6.11. Summary

The expansion of student enrolment was addressed, both as a fact resulting from the growing number of students, and as a component of reform models suggested by international organisations such as the OECD. The discussion highlighted the pressure this places on the capacity of Egyptian universities and the effect of such expansion on the quality of education.

Expanding higher education geographically to the less advantaged governorates should contribute to the equality among students across Egyptian governorates and to the socio-economic development of these governorates.

The discussion highlighted the dissonance resulting from the imbalance

between student demand, the job market demand and the national development plan, and the failure of the current framework to adequately meet any of these demands.

The need to define the particular role of HEIs in less-developed countries, which would be integrated with the wider national strategy to meet society's needs, was addressed.

The discussion highlighted the fact that in absence of a strong regulatory framework, the expansion of private universities and students' enrolment, as recommended by international organisations, may lead to commercialisation and polarisation and would not help fulfil the vision for national development.

Higher education reform is impossible to achieve without a strong government intention to do so, as expressed in a strategy that is based on a clear vision for social and economic development. It was therefore worrying to find that, amid the prevailing political and social instability in Egypt, higher education did not appear to be high on the priority list of the government. Expenditure on higher education is still way below the recommended percentage per student relative to per capita income. Financial resources, although increased, have not been allocated within an articulated and coherent national strategy for higher education; indeed, despite isolated initiatives here and there, no clear strategy appears to be in place.

While the OECD states that its projects are built on an analytical framework, which considers the countries' governance structures and experiences, the discussion cast doubt on whether the reports adequately take account of local cultural and socioeconomic contexts and devise sufficiently customised recommendations. The proposed reform models by international organisations are likely to present constraints in the case of less-developed countries and are unlikely to take account of a country's unique socioeconomic and cultural setting.

A tailor-made reform model needs to consider the public role of higher education for both economic and social development. Furthermore, the diversification of the higher education system by investing in vocational and technical education institutions and boosting their image within society is a must

if the needs of the job market are to be met and economic growth is to be achieved. Entrepreneurship education at universities has been highlighted as an approach which would transform universities and fulfil both job market and student demands. It was recognised that private higher education has a vital role to play, if properly regulated, in absorbing some of the expansion and contributing to the government's strategic objectives.

The proposed conceptual framework offers an umbrella that combines all pertinent issues for reforming higher education and provides a hybrid model that fits socio-cultural realities of a country as well as its development goals.

The discussion identified a number of prerequisites that need to be fulfilled if the implementation of a tailor-made reform model is to succeed. First and foremost is the issue of the country's political stability, which has sadly been severely lacking in Egypt in recent years. While this was seen as indispensable, freedom and democracy were found to be desirable, yet non-essential prerequisites of higher education reform. Rather, freedom and democracy can come as a result of such reform.

The discussion highlighted that the lack of trust in the government and in decision makers, as well as trust in the traditional role of educational institutions, diminishes reform efforts. For these to succeed, these institutions must prove their trustworthiness. Another prerequisite, which the discussion has drawn attention to, is that of cultural attitudes towards science.

CHAPTER 7

7. CONCLUSION AND IMPLICATIONS FOR POLICY

7.1. Introduction

The World Bank and OECD model of higher education reform, based exclusively on the requirements of the knowledge economy (expansion of enrolment), may exacerbate the existing inequality and the higher education/ job market mismatches. This may further cause commoditisation in higher education if the expansion relies to a great extent on the private sector due to the lack of public financial resources. Widening the admission criteria for higher education as described by the OECD reflects a lack of awareness of the reality and may lead to the collapse of the whole education system. Reforming higher education without appropriate public support and a clear definition of the role of higher education in the wider development goals may have severe consequences, including inequality in society and Egypt becoming nothing more than a consumer in the global higher education market.

In this chapter, the conclusion has been derived from the discussion and constructed in line with the research questions. It is followed by the associated implications on the reform of higher education in Egypt.

Within the overall aim of identifying the characteristics of a tailor-made model for reforming higher education in Egypt, the research questions sought to identify the current status of higher education and the perceptions and experiences of the stakeholders (UG, PG and academics), as well as the impact of the university role on the goals of reform. In order to establish whether or not Egypt is ready for the proposed reform, the priorities of higher education and prerequisites for reforming higher education in Egypt had to be identified. Hence, this research is concerned with answering the following questions:

- How do students and academics perceive higher education in Egypt?
- What are the views of academics and prominent intellectual figures on the role of higher education in Egypt?

- What are the perspectives on the prerequisites and priorities of higher education reform in Egypt?

The reform of higher education in Egypt has been hindered by the issues presented in this research. The quantitative and qualitative results of the study cast doubt on the feasibility of the adopted OECD reform model as well as the intentions of the Egyptian state. I argue that the actual causes of the problems were overlooked and that the effects have instead been focused upon. The findings of this study have demonstrated a different set of priorities for reforming higher education in Egypt to meet social and economic development goals, which are not associated with the expansion of higher education.

7.2. The Main Findings

7.2.1. Stakeholders' Perceptions of Higher Education

A mismatch exists not only between higher education degrees and the job market, but also between the university programmes and student demand. An expansion driven by the job market needs not only to be associated with the required skills, but also consider whether a higher degree is required in the first place.

It is essential to secure financial resources prior to commencing a higher education reform. Providing education by half measures produces a useless education system that is not adding any value to the country's economic development, while also damaging social values and trust in educational values. On the other hand, the misconception, which restricts success and respect to university degrees, has led to the perception that a third-class university degree can be of benefit in the job market.

Expansion is not likely to reduce inequality, nor is the reform implemented in Egypt — national examinations, expanded access, and elimination of fees — likely to increase inclusiveness. On the contrary, these have been shown to possibly result in greater social inequality.

The inadequate inclusion policies in place since the 1952 revolution have not only failed to sufficiently improve levels of inclusion, but within the context of limited financial resources have severely affected the output quality of higher

education. The financial resources allocated to higher education in the current constitution would not make a considerable difference from the performance of earlier years.

An expansion of private higher education in the absence of good quality public higher education and a strong regulatory framework may lead to commercialisation and would run against the national social and economic development vision. An expansion of private higher education, which encompasses both profit and non-profit providers may reduce the impact of commercialisation. Having said that, expansion of non-profit private higher education in the current climate of political instability may be exploited by certain political groups, which would impose political or religious views, resulting in a further increase polarisation in society. Once again, a well-crafted regulatory framework my help prevent this.

The brain-drain of Egyptian talents who leave to work abroad, especially to other Arab countries, is creating a vacuum in the job market and causing deterioration in various sectors, including higher education. Unless reform is considered within a wider national strategy to retain the human capital, brain-drain will remain an unsolved problem and a vicious cycle in which Egypt will continue to find itself. Infusing and channeling the knowledge of the Egyptian human capital abroad into the national knowledge capital utilising telecommunications networks may minimise the impact of the brain drain on Egypt.

Higher education in Egypt has reached a level of crisis that requires an immediate response. Over 72% of students expressed dissatisfaction with the quality of education as well as the services provided by HEIs, due to the incompetence of the academic staff and their inability to compete on a global level, as well as low scientific and ethical standards among the academic staff and their assistants, and the inability of some of them to teach the curricula clearly to the students.

The English language has been recognised by UNESCO as the dominant language of scientific communication. Higher education in Egypt is barely responding to this situation, either in terms of policies or the programmes provided. The lack of competency in this universal language of science is a

major barrier to the reform of higher education in Egypt for a global knowledge economy, as it affects the acquisition of knowledge as well as the communication of knowledge. This has a great impact on reforming curricula, teaching and research for both students and academics. Egyptian graduates and academics lack a competitive edge in national, regional and global job markets. Furthermore, there is a considerable gap in Arabic content, especially scientific content, which is related to the limited efforts in translating content into the Arabic language. Moreover, the increasing gap between the spoken Arabic language in Egypt and the formal Arabic language used in educational circles is affecting the pedagogical processes. Dedicated research may need to be conducted on the scientific Arabic content.

Demographically, Egypt has a very young population, hence the growing demand for higher education, and the associated social pressures on the state. Alternative approaches can be developed to meet that demand. There is a wide range of modalities to respond to this situation, such as the role of technology in facilitating access to higher education. However, academics are strongly pushing back against the use of e-learning portals, which would make educational material available and accessible. It seems there is no enough political will to confront academics on this issue at this stage for political reasons.

7.2.2. Role of Higher Education

Full consideration should be given to entrepreneurship education for economic and social development. Over three quarters of students want to start their own business, which would encourage enterprise and help Egypt become more globally competitive. The goal should be an efficient workforce rather than a higher percentage of graduates among young people.

According to the conceptual framework, reforming higher education is an iterative process to achieve a desired goal that is focused on relevancy, quality and equality. The goal of the reform of higher education differs on short, medium and long terms according to the national strategic development plan, and must respond to both national and global changes and challenges. State-centric or neo-liberal models are not the key for successful higher education

since both are static, requiring certain settings and are not flexible enough to respond to social or economic changes. A successful model is conditional on certain economic, political, social and cultural aspects, which are variable and change at short intervals within the global knowledge economy. Thus, a flexible higher education reform model that is agile and responsive to fast-paced changes is the key to successful higher education, which meets the social and economic needs of a country.

The concept of higher education reform for global knowledge economy is based on a flawed assumption that has been trying to force a link between higher education and economic growth, which is not sufficiently proven, and the claim that investment in more universities generates more economic growth. Subsequently, a series of links has been formed on a misleading basis, such as investment in higher education to meet the growth in enrolment and increasing the number of higher education graduates for the job market. As the massification of higher education has become a global trend, the expansion of higher education has become a synonym for reform, in part to meet a certain political agenda in developed countries, namely, the utilisation of the considerable part of the higher education sector that has departed from the university's traditional role of producing knowledge and replaced the professional and vocational training institutes. Universities with robust capabilities will continue producing knowledge, while others will accept the shift of their role and maintain their positions to compete in the global market.

Reforming higher education in less-developed countries according to the global trend of massification of higher education eliminates any hope for producing knowledge in higher education. The role of international organisations was to roll out and impose such an agenda globally.

The university role in terms of research should be focusing on producing Mode 2 of knowledge production (procedural knowledge/ just-in-time knowledge) rather than Mode 1 of knowledge production (propositional knowledge/ just-in-case knowledge). This should re-establish the university role as a knowledge producer for a greater exploitation of problem-solving knowledge.

University is, and should be, about producing, select, leading individuals and providing a model that guides the whole nation intellectually and socially, with a

wide spectrum of inclusiveness opportunities to attract talented young people. In developed countries mechanisms have been developed to lead people intellectually and socially, such as through well-established and prestigious universities that are not available in the less-developed countries. However, reforming higher education according to the expansion model of the OECD will relegate universities in the less-developed countries forever to be an extension of the second and third-class universities in the developed countries in a best-case scenario.

When analysing the issue of higher education, it is essential to separate the issues of higher education funding, enrolment expansion and inclusiveness, the university's role and the job market, in order to be able to track causes rather than being misled by effects.

The rise of knowledge as a major driver of economic growth created a direct association between universities and economic development, as universities have been custodians of knowledge before knowledge began to be developed outside of higher education institutes. However, a direct association has not yet been created between university and social development, despite the recognition of knowledge as a major driver of social development as well. Since knowledge has become a commodity in the global knowledge economy, universities have become commercialised. This association has impacted the role of the university and restricted it to the service of the job market, while disregarding its role vis-à-vis society, due to the difficulties in measuring such a role empirically. These factors have led to significant changes to the sphere of higher education in Egypt and presumably other less-developed countries, which will necessitate a critical re-examination of the role of the university prior to implementing a ready-made higher education reform model.

It may not be feasible to reform higher education in Egypt as long as both the secular and religious higher education systems are maintained with their discrete roles and goals. There is an increasing potential risk of cultural divide in society, in light of the current political tension between radical movements and the government. It is unlikely that the government will consider such a serious reform, at least for the time being.

The dramatic decline in the quality of education at Egyptian universities also

contributed to the diminution of the role of universities as an agent of change where the social and economic structure of a country can be changed through teaching. With the rapid development in information and communication technologies, other channels are now leading the change in society (e.g. social media), placing universities among the institutions more resistant to change. Reforming higher education in Egypt is thus in many aspects an uphill battle that needs to be tackled within a wider national strategy, including a tangible development of information and communication technologies infrastructure and applications.

7.2.3. Prerequisites and Priorities of Higher Education Reform

The expansion of higher education in Egypt, as recommended by the OECD report, does not mean an improvement of higher education quality or an increase in jobs available for graduates. The entry-level bar for employment has been raised to require more postgraduate qualifications. The current high unemployment rate, especially among university graduates, suggests that a prerequisite to reforming higher education in Egypt is a sound economic policy.

The culture of lack of trust in authority needs to be addressed. Improving the levels of trust in and the trustworthiness of the system (public sector in general) are important prerequisites for the reform of higher education in Egypt, as is improving the level of trust and embracing shared values among the stakeholders in higher education. On the other hand, the lack of confidence in science against religion needs to be addressed at a societal level as well as an education level.

A successful reform model for higher education in Egypt needs a well-crafted strategy that balances inclusiveness and quality. This balance should inform the position of Egyptian higher education on a continuum between the state-centric model and the neo-liberal model. A tailor-made model for reforming higher education in Egypt may be developed for a global knowledge economy in a knowledge society framework by positioning higher education according to the economic, social, political and cultural variables in response to the national strategic development plans.

In light of the current political context and instability, reforming higher education

in Egypt may not be feasible without establishing a culture of negotiated social agreement about the aims of higher education. Political stability and long-term commitment are essential for sustainable reform, and reconciliation within society for the sake of stability may be a prerequisite for the reform of higher education. A sustainable and thorough reform of higher education can only be achieved by defining long-term societal goals through democratic consultation encompassing society as a whole.

Reforming higher education without the appropriate public support and a public role for national universities may have disastrous consequences, such as inequalities in society, continuous brain-drain and the reduction of Egypt to the role of consumer in the global higher education market.

Despite the fact that knowledge economy is an indispensable prerequisite (economic growth, public sector) for reforming higher education, it cannot be a framework for the reform, since the role of higher education within its framework is largely limited to the enrolment rate. Furthermore, it lacks all dimensions of knowledge whose values cannot be reduced to a commodity exchange, such as human rights and freedom. Adopting the World Bank and OECD model of higher education that is based exclusively on the requirements of the knowledge economy is likely to widen existing divides and give rise to new forms of exclusion, not only between the developed countries and Egypt, but also within Egypt. This is due to a decline in the state's commitments towards higher education, despite the recent amendments to the constitution relating to higher education. The result may be a commoditisation of higher education and may permanently relegate Egypt to nothing more than consumer status in the global knowledge economy. Figures concerning knowledge economies alone do not sufficiently take account of socio-cultural realities. The role of higher education should be customised to the needs of society and integrated in a wider national strategy.

An articulated political vision and strategy, a sound higher education regulatory system, efficient public sector and a well-crafted national development plan along with a sound economic policy are the key factors to face a matrix of challenges in reforming higher education: expansion vs. quality, academic priorities vs. financial limitations, efficiency vs. effectiveness, financial

considerations vs. equality, local relevance vs. global standards, relevance to the job market vs. students' demands and finally the appeal of the global knowledge economy.

Due to the lack of public financial resources, expansion of private higher education could be an option to meet the national strategic development plan. However, such an expansion is subject to quality and standards in public higher education being improved.

The higher education system and institutions cannot reform higher education outside of the political, economic, social and cultural context. This means that if the basic required reforms are undertaken in other fields, particularly the political and economic fields, this may have immediate and substantial benefits for higher education. So far, there is no indication that political will is present despite the recent amendments in the constitution pertaining to higher education, in addition to weak governance. There is a weak public policy framework and a vague vision that is not articulated in a clear and consistent manner.

Expansion of higher education in Egypt is not a priority, however reforming higher education is a necessity with an emphasis on quality and the regulatory framework. The ultimate goal of the reform can be ambitious, but the start needs to be modest, gradual and on solid ground. There are prerequisites to the reform that need to be fulfilled prior to the implementation and the investment in higher education. Otherwise, financial resources will be wasted without reaching the sought-after goals, as has been the case with the reform programme since 1997.

It is extremely challenging to reform higher education without a good basic education or a sound economic policy. On the cultural front, it is essential to reconstruct the collective consciousness to eliminate a large number of firmly established myths and illusions which cast doubt on science and the aptitude of the human brain.

7.3. Implications for Policy and Advancement of the Field

This study has generated a set of implications that would be of interest to policy-makers, subject matter experts, academic staff, educators, students and

the general public. These implications are subject to the earlier identified prerequisites, namely: political stability, economic growth, public sector reform, shared values, and cultural and social perceptions. Several of these implications are discussed below, however they are in no way exhaustive. They are intended to shed lights on the characteristics of a tailor-made model for the reform and to stimulate rethinking on how the insights from this study might impact on the reform of higher education in Egypt.

To begin with, the vision for higher education reform in Egypt that needs to move from a narrow focus on single issues to a wider national socio-economic strategy, which takes account of cultural and perceptual issues related to higher education and redefines cultural and social values among the younger generation, encouraging them to look beyond higher degrees.

A general social consensus on the desirable direction for economic and social development in the country will be needed, which would be dependent on human capital for its economic success. Also, the need for social consensus on higher education, on the value of science, of education and of respect for educators is inevitable to roll out systemic reform that is driven and monitored centrally. It certainly is the case that the teaching profession is poorly respected in Egypt, but this is not the result of relatively low pay. Respect for teaching comes from a complex set of cultural values, which have been in decline in the last 60 years due to political, social and economic changes, with a considerable contribution from the popular media.

The higher education system will not improve as a result of some commitment to a general notion of ‘higher education reform’, rather it will improve when a consensus has been carefully developed, around a very tightly defined common set of aims and objectives that are associated with specific plans. The keys for the reform are political will, social consensus, regulatory framework and a precise, centralised, implementation strategy.

The role of the university in Egypt needs to be redefined prior to the reform of higher education within the context of a negotiated social agreement. The perception of university needs to be reconstructed in the collective consciousness as the mainstay of solutions to social and economic problems and as society's intellectual asset. Universities need to actuate an active role to

pursue the national plan for social and economic development. The key role for universities is to produce and transfer knowledge, and to develop a workforce that is competent in relevant skills. Thus, universities that become more engaged in development could lead to direct benefits to social and economic growth. Universities have to establish closer relationships and networks across communities, business and industries to make higher education more agile and responsive to both local and global changes.

Investment in R&D at universities needs to be strategised towards locally relevant research to actuate the university role as knowledge producer as well as re-establishing trust in HEIs among society.

For the sake of social cohesion, it is imperative for Egypt to tackle the cultural dualism between the secular and religious higher education systems by establishing a unified system where the role of higher education and its goals are clearly defined within a national development strategy.

In order to augment the role of science in society in particular and human life in general, a national strategy across various sectors would be needed to respond to the lack of confidence in science. It may help to craft a goal for university to address the current cultural and social issues in society. On the other hand, to ensure an effective reform, full consideration needs to be given to the ethics and value issues that have been raised in this study, in order to improve the trust levels in HEIs and the trustworthiness of the system.

Universities must be financially secure and immune to any political interference and must not serve as proxies of any political players but rather act independently and dedicate their services solely to social prosperity. However, at least at the first stages of a comprehensive reform, curricula and the associated teaching methods should be centrally specified and developed to adapt to the needs and changes of job market and societies, while maintaining the quality and avoiding resource wastage. Centralisation of curricula does not mean unified curricula.

Egypt has over 60 years of history of inclusion policies, following the state-centric model. Clearly, it has no history of implementing a neoliberal model or a culture of negotiated social agreement. The causes of the dramatic decline in

higher education are not model-related, however it is highly recommended for Egypt to maintain the same state-centric model. Changing to the neoliberal model at the current status as discussed in this research may lead to the collapse of the higher education system, or at least cause more damage. Moreover, switching to the neoliberal model will be misleading and provide a false perception that changing the model will reform higher education. A balanced position between the two models as per the conceptual framework would allow a gradual shift as required by the national strategic development plans.

Within the current limited financial resources and public administration capabilities, the current rate of public higher education enrolment should be capped and focus should be maintained on improving the quality of higher education. Enrolment in publicly funded universities needs to be restricted to the degrees that meet either the national strategic development plans or job market needs within a global competitive setting. However, other degrees that meet student demands may be offered too but at full cost. This should set a benchmark for the inevitable future expansion of private higher education.

Capping enrolment at public higher education should run parallel to a reform and an expansion of vocational and technical education, in order to ensure suitable alternatives are available for students. On the other hand, the government should create new paths for success and encourage entrepreneurship education for economic and social development. Such programmes can also be built-in components of all curricula regardless of discipline, thus encouraging enterprise and job creation.

The critically needed expansion is geographical expansion of universities to cover remote and less advantaged governorates to contribute to the equality among students across all governorates as well as the socio-economic development of these governorates.

The regulatory system needs to stipulate submission of accountability data on HEIs, allowing evaluation of quality at institutional level as well as governorate level. Results of evaluations should be published at a national level, while individual university results should be shared with relevant universities only. But universities must be obliged by law to respond and react to such evaluations.

The quality control mechanism to ensure that some things are done and other things not needs to be implemented, not by imposing accountability on minimally-trained academics or university staff (back-end control), but by ensuring the establishment of norms of high quality practice (front-end control). A culture of quality and pride of work needs to be established in the sphere of higher education in Egypt.

It is imperative for Egypt to reconstruct a dynamic and consistent national system of higher education that is agile and responsive to fast-paced changes, both nationally and globally, for sustainable social and economic development.

7.4. Contribution to Knowledge

The study is original in that it is the widest survey of higher education of Egypt. It captures stakeholders' views and perceptions of higher education, which have rarely been presented across such a wide spectrum. This offers baseline data for future studies that measure the perception of higher education among stakeholders and how developments in higher education are perceived.

The contribution to knowledge presented in this study emerges initially from the development of a conceptual framework that reconciles the state's concept of higher education and its role with that of society and of the market. Despite the fact that the conceptual framework has been developed to identify the characteristics of a tailor-made model for reforming higher education in Egypt (see Figure 117), it is transferable and applicable to other less-developed countries where there is uncertainty about the direction of reform within the context of their national development plans.

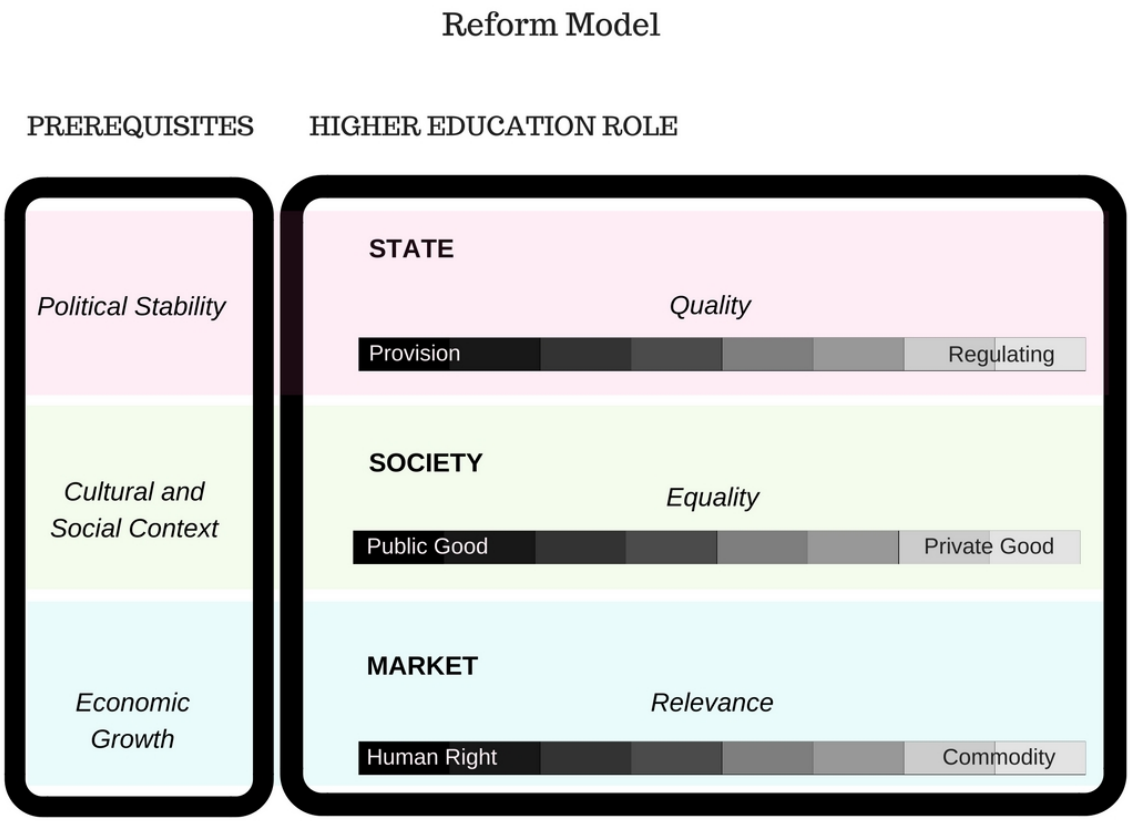

Figure 117: Tailor-made Model for Reforming Higher Education

Identifying the concept of knowledge society as a framework as opposed to the knowledge economy framework for reforming higher education.

This study contributes to the scholarly literature and the corpus of knowledge in several ways:

Firstly, the study adds to the international scholarly discussion of higher education reform and development challenges by bringing an international perspective on Egypt, a country underrepresented in the higher education reform literature. The study locates Egypt and its higher education system within the global context of power dynamics, examines the way Egypt and other less-developed countries are viewed in the international literature, and illuminates issues pertaining to the cultural and social aspects, as well as contextualizing the higher education issues within the modern history, and economic and political developments in Egypt. It examines in detail the role of higher education for the national development plan in a wider context that includes the cultural and social aspects.

Secondly, the study has sought to fill gaps in existing literature on the role of

higher education in Egypt and its reform. Such literature has traditionally either dealt with employment and job market perspectives or with pedagogical perspectives. To redress this deficiency, the research has proposed a holistic and conceptual approach to higher education in Egypt, which takes into account the relevant surrounding social, political and cultural aspects within the frameworks of knowledge economy and knowledge society. The approach aimed to position higher education in a way that strikes a balance between diverging concepts: public good versus private good, and university as a human right versus university as an investable commodity.

Furthermore, the study has provided unique comprehensive insight into stakeholder perceptions of higher education in Egypt, their views, motivations and expectations of priorities and government reform plans.

Finally, the study contributes to the Egyptian discourses of economic, political, social and cultural development, and higher education reform. It develops a critical perspective and promotes qualitative methods of inquiry such as interviews with higher education policymakers, SMEs and PIFs. Higher education is a growing field of study in Egypt and other Arab countries, but only limited qualitative and critical research has been undertaken to analyse major trends and issues of higher education.

7.5. Personal reflection on the thesis journey

Being enthusiastic at the start of this research, I was determined to collect as much data as I possibly could, in order to ensure full awareness of the research problems, even though I was aware of how overwhelming data can be, particularly if some of it is extraneous. However, I learned the hard way that is not possible to analyse all available data related to my research topic. I improved my research skills in prioritising the data according to a set of topical criteria derived from the research objectives. Mind-mapping techniques were utilised to outline these criteria and to check the data systematically against the criteria. This has kept me focused on the scope of the research, since the subject of knowledge economy/ society has been covered in various disciplines (economy, management, sociology, information technology, etc.). Other criteria such as authority and credentials of authors and publication data have been

considered in order to increase the level of validity of literature review findings.

In terms of the critical analysis of secondary data, valuable research experience has been gained to a competence level to allow the creation of new perspectives of the existing knowledge. There was an assumption, before I became deeply engaged in this research, that publications or reports by international organisations in particular were comprehensive and factual. However, the current research experience proved that it is not necessarily the case. In fact, I was able to identify a range of shortcomings associated with some works discussed in this research, such as the OECD report (2010). I believe that the critical approach acquired during the analysis of the secondary data will be an added value to my expertise and knowledge in both my professional and my personal life.

I believe that I gained valuable research skills during the fieldwork of this research despite my previous experience in data collection for research projects. It was an unprecedented experience where I engaged in administering large-scale surveys covering HEIs in Egypt.

The primary data has been obtained through the use of questionnaires for academic staff, undergraduate and postgraduate students as well as interviews with UNESCO and OECD subject matter experts, prominent intellectual figures and officials from the MoHE. I thereby gained in-depth knowledge about the procedures of data collection from evaluating the sampling methods to questionnaire and interview design all the way to the representation of the collected and analysed data.

Using mixed research methods in this research has not only afforded me in-depth knowledge of both qualitative and quantitative approaches but also in-depth understanding of the big picture of research methods which shaped the development of my thoughts as a researcher and scholar.

The amount of qualitative data (i.e. interviews, open end questions in the surveys, OECD report of 2010) was immense to an extent that cannot easily be analysed manually without losing focus or missing correlations. Hence, qualitative data analysis software has been utilised to establish an initial systematic data analysis through a coding system, which allowed me to identify

correlations across texts in a wider context.

Indeed, it has been a serious commitment and a huge project to tackle; however the sense of achievement is second to none.

7.6. Scope and Delimitation

The reform of higher education in Egypt is the subject of this study within the context of the global knowledge economy and knowledge society. Hence, the scope of research included:

- The World Bank's (2010) framework for the knowledge economy, which defines four components of knowledge economy as being: Education and Human Capital, Information Infrastructure, Economic Incentive and Institutional Regime, and Innovation Systems. Two of the components, 'Education and Human Capital' and 'Innovation Systems ' are directly relevant to higher education and its educational and research functions (see Section 3.8, 'Knowledge Economy and Knowledge Society Frameworks'). However, the other two components, 'Information Infrastructure' and 'Economic Incentive and Institutional Regime' are prerequisites for reforming higher education (see Section 6.10, 'Prerequisites').
- The wider knowledge society framework, since higher education is one of the thirteen dimensions for the knowledge society due to the anticipated role of university in promoting the culture of knowledge sharing and inclusiveness among societies (see Figure 9, 'Knowledge Society & Knowledge Economy Frameworks').
- Government initiatives, since the establishment of a national committee for reforming higher education in 1997 until the invitation to the OECD for reviewing the higher education in Egypt and producing a country report in April 2010, that is reviewed among other selected MoHE literature for that period (see Section 3.6, 'Historical Overview of Higher Education Reform').
- The views on reforming higher education in Egypt gathered by interviewing selected officials at the MoHE, subject matter experts at

UNESCO and OECD, and prominent intellectual figures in Egypt. The reform of higher education along with the role, prerequisites and priorities are discussed in sections 6.5 (‘Reform of Higher Education’), 6.9 (‘Reform of Higher Education’) and 6.10 (‘Prerequisites’).

- The perception of higher education among stakeholders (students and academics) as surveyed across HEIs (public and private institutions), which revealed the landscape of higher education in Egypt and the current status of education, research and student support as well as the quality of higher education (see Chapter 5, Qualitative and Quantitative Findings and Analyses).

For the purpose of this research focus is maintained on the perception of students and academics, while the perception of other higher education stakeholders, such as parents, professional associations, business and industrial employers, is excluded. It should be also be noted that pedagogical perspectives of higher education reform are excluded from the scope of research (see Section 7.7, ‘Suggestions for Further Research’), since the research provides a holistic and conceptual approach to higher education role in Egypt within the knowledge economy and knowledge society frameworks, with an emphasis on the social, economic, political and cultural aspects.

In terms of the limitation of this study, it is worth mentioning that the unstable political situation in Egypt has had a significant impact on the work of the MoHE. Since 2013, there have been four ministers of Higher Education in succession, each representing the views of a different political party or group, starting with the old regime, followed by an interim liberal government, then Islamist, and the current regime. None of these governments has managed to establish or endorse a strategy for reforming higher education. This instability resulted in a noticeable lack of documentation or detailed written plans for higher education in Egypt.

The change in leadership also brought about changes in the key positions within the Ministry. Connections established with the holders of such key positions in the Project Management Unit for Developing Higher Education were quickly lost when the government changed and with it the leadership of the Project Management Unit, which directly reports to the Minister of Higher

Education.

No strategies or plans for reforming higher education in Egypt are available in the public domain. Several key position holders at the Ministry confirmed that no such strategies or plans exist, only work in progress on certain initiatives that are expected to add value to the development of higher education in Egypt.

Due to political sensitivity issues, it was extremely difficult to interview more officials who would have brought insights to the study. Leading figures at the MoHE were not willing to provide information and most of them refused to be interviewed. Those who did agree to an interview refused to allow the recording of the interview. Notes were taken during these interviews. The only interviewee to allow the recording of his/her interview was a senior official at the 'National Authority for Quality Assurance and Accreditation of Education'.

On a different note, due to the low number of responses from private universities statistical significance cannot be calculated in relation to the high responses from public universities, which limits the possibility of making any generalisations from the findings of private university's students. The length of the questionnaire may well have deterred some from responding. Given that this was an exploratory study, not an evaluative study, generalisations from these findings can be a subject of future research.

Using online questionnaires, whether through social media or HEIs' websites, limited the respondents to those who have Internet access.

Certain questions with limited relevance to the core topic (student unions and welfare questions) would have shorted the time needed to complete the questionnaires; hence more respondents might have completed the questionnaires, increasing the sample size. However, these questions provided deeper insight into various pertinent issues.

7.7. Suggestions for Further Research

In light of what has been discussed in this research, further research will be needed for a sustainable reform of higher education in Egypt.

- An assessment methodology for knowledge society, similar to the World Bank's assessment methodology for knowledge economy, to identify and

measure its components.

- An assessment methodology to measure the impact of higher education on economy and society.
- Pedagogical perspectives of higher education reform in Egypt.
- The current dynamics that shape the interaction between higher education in Egypt and the job market nationally, regionally and internationally.
- The Arabic scientific content landscape and knowledge gaps in light of the English Language as a global scientific communication language.
- Privatisation of entrepreneurship, professional and vocational education in Egypt and partnership models with global industrial firms.
- The representation of the value of science and knowledge in Egyptian media and how it impacts the national development plans.
- Dualism and religious education in Egypt and its impact on faith in science and reason.
- The concept of trust in Egyptian society and its impact on economic and social growth.

7.8. Conclusion

At present, it is far from clear that the authorities in Egypt have either the vision or the political will to implement the required reforms in higher education, without which Egypt faces the prospect of continuing to be nothing more than a consumer of other nations' knowledge products and risks exacerbating existing social and knowledge divides in society and creating new forms of exclusion within the country. Such a future is unsustainable, given the overwhelmingly young population, and their expectations of a secure and improving standard of living. Perhaps the main source of hope lies in the fact that many young students are not content with the status quo. They realise that things can and should be better. Alternatives such as online learning may help them access tuition of a better standard. Egyptian higher education may find itself being left behind by the online tuition revolution as students vote with their browsers and believe in better.

8. BIBLIOGRAPHY

Abd Al-Hamid, G., Saad, R., Gomma, H. W., Kalifa, A., & Gadalah, Y. (2010). Higher education in Egypt, country background report summary. Retrieved from http://www.mhe-spu.org/new/admin/uploads/resources/country_background_report_summary-20100317172627.pdf

Aguinis, H. & Henle, C. A. (2002). Ethics in research. In S. G. Rogelberg (Ed.), *Handbook of research methods in industrial and organizational psychology.* Malden, Mass.: Blackwell Publishers. Retrieved August 14, 2015, from http://sociology.sunimc.net/htmledit/uploadfile/system/20110226/20110226123701188.pdf#page=50

Al-Kawakibi, A. (2014). *Tabai al-istibdad wa-masari al-isti'bad (the nature of despotism).* Cairo: Dar Al-Shuruk. (Original work published 1902).

Association, A. P. (2009). *Concise rules of APA style.* American Psychological Association. Retrieved from Google Scholar.

Amin, G. A. (2000). Whatever else happened to the Egyptians?: Changes in Egyptian society from 1950 to the present . Cairo: American University in Cairo Press.

Andrews, K. (2004). Attachment A: A review of selected knowledge focussed literature. In *Working and learning in vocational education and training in the knowledge era, professional development for the future project* (pp. 1-21). Australian National Training Authority. Retrieved from Google Scholar.

Assaad, R. (2007). *Working Paper Series: Vol. 0701. Labor supply, employment, and unemployment in the Egyptian economy, 1988-2006.* Cairo: Economic Research Forum. Retrieved from Google Scholar.

Assaad, R., Badawy, E., & Krafft, C. (2014). *Working Paper Series: Vol. 828. Differences in pedagogy, accountability, and perceptions of quality by type of higher education in Egypt and Jordan*. Cairo: Economic Research Forum. Retrieved from Google Scholar.

Assaad, R., Krafft, C., & Salehi-Isfahani, D. (2014). *Working Paper Series: Vol. 826. Does the type of higher education affect labor market outcomes? A comparison of Egypt and Jordan.* Cairo: Economic Research Forum. Retrieved from Google Scholar.

Assembly, G. (1966). International covenant on economic, social and cultural rights (UN, 1966). *United Nations, Treaty Series*, *993*, 3. Retrieved from Google Scholar: http://www.ohchr.org/Documents/ProfessionalInterest/cescr.pdf

BERA. (2011). *Ethical guidelines for educational research*. Birmingham: BERA. Retrieved from British Educational Research Association: https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf

Bergan, S. (2005). Higher education as a public good and a public responsibility: What does it mean? In *Council of Europe Higher Education Series (2): The public responsibility for higher education and research* (pp. 13-28). Strasbourg: Council of Europe. Retrieved from Google Scholar.

Baumeister, R. F., & Leary, M. R. (1997). Writing narrative literature reviews. *Review of General Psychology*, *1*(3), 311. Retrieved from Google Scholar.

Biddle, C., & Schafft, K. A. (2015). Axiology and anomaly in the practice of mixed methods work pragmatism, valuation, and the transformative paradigm. *Journal of Mixed Methods Research*, *9*(4), 320-334.

Biesta, G. (2007). Towards the knowledge democracy? Knowledge production and the civic role of the university. *Studies in Philosophy and Education*, (26), 467-479. doi:10.1007/s11217-007-9056-0

Birchall, J. (2011). Sampling and samples. [Web page] Retrieved from http://www.marketresearchworld.net/index2.php?option=com_content&task=view&id=23&pop=1&page=3&Itemid=1

Bland, J. M., & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *Bmj*, *314*(7080), 572. Retrieved from Google Scholar

Bogdan, R., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theories and methods.* Boston, Mass.: Pearson A & B. Retrieved from Library of Congress or OCLC Worldcat.

Boote, D. N., & Beile, P. (2005). Scholars before researchers: On the centrality of the dissertation literature review in research preparation. *Educational Researcher*, *34*(6), 3-15. Retrieved from Google Scholar.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, *9*(2), 27-40. Retrieved from Google Scholar.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101. Retrieved from Google Scholar.

Brinkley, I. (2006). *Knowledge economy programme report: Defining the knowledge economy.* London: The Work Foundation. Retrieved from Google Scholar.

Buckner, E. (2013). Access to higher education in Egypt: Examining trends by university sector. *Comparative Education Review*, *57*(3), 527-552.

Burgess, T. F. (2001). A general introduction to the design of questionnaires for survey research. *Leeds: University of Leeds*.

CAQDAS. (2011). Choosing an appropriate CAQDAS package. *CAQDAS* [Web page]. Retrieved from The CAQDAS Networking Project: http://www.surrey.ac.uk/sociology/research/researchcentres/caqdas/support/choosing/index.htm

Carifio, J., & Perla, R. J. (2007). Ten common misunderstandings, misconceptions, persistent myths and urban legends about likert scales and likert response formats and their antidotes. *Journal of Social Sciences*, *3*(3), 106-116. Retrieved from Google Scholar.

Charlesworth, A. (2011). Understanding and managing legal issues in internet. In N. Fielding, R. M. Lee, & G. Blank (Eds.), *The SAGE handbook of online research methods* (pp. 42-57). Sage.

Chan, Y., & Walmsley, R. P. (1997). Learning and understanding the kruskal-wallis one-way analysis-of-variance-by-ranks test for differences among three or more independent groups. *Physical Therapy*, *77*(12), 1755-1761. Retrieved from Google Scholar.

Chen, H. C., & Dahlman, C. J. (2005). The knowledge economy, the KAM methodology and World Bank operations. Washington DC: World Bank.

CIPD. (2015). *EU Briefing: January 2015. Encouraging enterprise in education.* London: CIPD. Retrieved from https://www.cipd.co.uk/binaries/encouraging-enterprise-in-education_January-2015.pdf

Collins, C., & Rhoads, R. (2010). The World Bank, support for universities, and asymmetrical power relations in international development. *Higher Education*, *59*(2), 181-205. doi:10.1007/s10734-009-9242-9

Considine, M., Marginson, S., Sheehan, P., & Kumnick, M. (2001). *The comparative performance of Australia as a knowledge nation* [Report to the Chifley Research Centre]. Canberra: Chifley Research Centre. Retrieved from Google Scholar.

Constitution of the Arab Republic of Egypt. (1971). *Constitution of the arab republic of egypt.* Retrieved from ConsititutionNet: http://www.constitutionnet.org/files/Egypt%20Constitution.pdf

Constitution of the Arab Republic of Egypt. (2014). *Constitution of the Arab Republic of Egypt.* Cairo. Retrieved from State Information Services: http://www.sis.gov.eg/Newvr/Dustor-en001.pdf

Cook, B. J. (1999). Islamic versus western conceptions of education: Reflections on Egypt. *International Review of Education*, *45*(3-4), 339-358. Retrieved from Google Scholar.

Cooke, P. & Leydesdorff, L. (2006). Regional development in the knowledge-based economy: The construction of advantage. *The Journal of Technology Transfer, 31(1)*, 5-15.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Los Angeles: Sage publications.

Creswell, J. A., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Sage Publications, Inc.

Cupito, E., & Langsten, R. (2011). Inclusiveness in higher education in Egypt. *Higher Education*, *62*(2), 183-197. Retrieved from Google Scholar.

Damyan, H. Q. (2014). *[Financial statement of the draft state budget for the financial year 2014/2015].* Retrieved from Ministry of Finance, Egypt.

Dash, N. K. (2005). Selection of the research paradigm and methodology. *Online research methods resource for teachers and trainers* [Web page]. Retrieved from www.celt.mmu.ac.uk: http://www.celt.mmu.ac.uk/researchmethods/Modules/Selection_of_methodology/

David, P. A., & Foray, D. (2002a). Economic fundamentals of the knowledge society, policy futures in education. *Revista De Comercio Exterior. Junio 2002: 472-490. México DF. Mexico.* Retrieved from Google Scholar.

David, P. A., & Foray, D. (2002b). An introduction to the economy of the knowledge society. *International Social Science Journal*, *54*(171), 9-23. Retrieved from Google Scholar.

Delanty, G. (2002). *Challenging knowledge: The university in the knowledge society.* Taylor & Francis.

EIPR. (2016). Let's respect the constitution and our children's future. *Egyptian Initiative for Personal Rights* [Web page]. Retrieved from eipr.org: http://eipr.org/en/pressrelease/2016/07/11/2644

El-Araby, A. (2011). A comparative assessment of higher education financing in six Arab countries. *Prospects*, *41*(1), 9-21. Retrieved from Google Scholar.

El Gamal, S., & Aziz, A. E. (2011). The perception of students regarding e-learning implementation in Egyptian universities: The case of Arab Academy for Science and Technology. In *Proceeding of eL&mL: The third international conference on mobile, hybrid, and on-line learning* (pp. 1-5). Retrieved from Google Scholar.

El Gamal, S., & Abd El Aziz, R. (2012). Improving higher education in Egypt through e-learning programs: HE students and senior academics perspective. *International Journal of Innovation in Education*, *1*(4), 335-361. Retrieved from Google Scholar.

El Sebai, N. M. (2006). The egyptian higher education system: Towards better quality in the future. *Journal of Futures Studies*, *11*(2), 75-92. Retrieved from Google Scholar.

ERAWATCH. (2010). *ERAWATCH research inventory report for: EGYPT* (pp. 1-88). European Communities. Retrieved from ERAWATCH: http://cordis.europa.eu/erawatch

Fahim, Y., & Sami, N. (2011). Adequacy, efficiency and equity of higher education financing: The case of Egypt. *Prospects*, *41*(1), 47-67. Retrieved from Google Scholar.

Fahim, Y., & Sami, N. (2010). Access to and equity in financing higher education in Egypt. In A. Galal & T. Kanaan (Eds.), *Policy Research Report: Financing higher education in Arab countries* (pp.11-29). Cairo: Economic Research Forum.

Fricker, R. D. (2011). Sampling methods for web and e-mail surveys. In N. Fielding, R. M. Lee, & G. Blank (Eds.), *The SAGE handbook of online research methods* (pp.195-216). Sage.

George, E. S. (2006). Positioning higher education for the knowledge based economy. *Higher Education, 52*(4), 589-610. doi:10.1007/s10734-005-0955-0.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. Sage.

Godin, B. (2006). The knowledge-based economy: Conceptual framework or buzzword? *The Journal of Technology Transfer*, 31(1), 17-30. Retrieved from Google Scholar.

Gray, E., & Burke, M. (2008). African universities in the knowledge economy: A collaborative approach to researching and promoting open communications in higher education. *Open Scholarship: Authority, Community and Sustainability in the Age of Web*, *2*, 254-270. Retrieved from Google Scholar.

Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *ECTJ*, *29*(2), 75-91. Retrieved from Google Scholar.

Guion, L. A. (2002). Triangulation: Establishing the validity of qualitative studies (FCS6014). *Gainesville, FL: Florida Department of Family, Youth, & Community Sciences.* Retrieved from Google Scholar.

Gurria, A. (2012). OECD's contribution to international development: Knowledge sharing and policy coherence. (Remarks by Angel Gurría, Secretary-General OECD, London, 4 December 2012 *)*. Retrieved August 12, 2015, from the OECD database, http://www.oecd.org/about/secretary-general/oecdscontributiontointernationaldevelopmentknowledgesharingandpolicycoherence.htm

Gurria, A. (2012). OECD's contribution to international development: Knowledge sharing and policy coherence. [Remarks by Angel Gurría, Secretary-General OECD, London, 4 December 2012]. Retrieved from OECD: http://www.oecd.org/about/secretary-general/oecdscontributiontointernationaldevelopmentknowledgesharingandpolicycoherence.htm

Habermas, J. (1972). *Knowledge and human interests: Transl. By jeremy J. Shapiro.* Beacon Press.

Hart, C. (1998). *Doing a literature review: Releasing the social science research imagination.* London: Sage.

HEFCE. (2009). *Guide for members of higher education governing bodies in the UK: Governance code of practice and general*. Retrieved from HEFCE: http://webarchive.nationalarchives.gov.uk/20100202100434/http://www.hefce.ac.uk/pubs/hefce/2009/09_02/#exec

Helal, H. (2011, March 29). Impact of the TEMPUS programme on egyptian higher education. [Belgrade, 29-30 March 2011] (Belgrade, 29-30 March 2011). Retrieved from http://eacea.ec.europa.eu/tempus/events/documents/report_belgrade_2011/presentation_belgrade_hany_helal.pdf

HEEP (2010a). Higher education reform strategy. *Higher Education Enhancement Project* [Web Page]. Cairo: Projects Management Unit, MoHE. Retrieved February 10, 2011, from http://www.heep.edu.eg/pmu-strategic.htm

HEEP (2010b). Historical background on phases of developing higher education enhancement over the past twenty years (1989 - 2009). *Higher Education Enhancement Project* [Web Page]. Cairo: Projects Management Unit, MoHE. Retrieved February 10, 2011, from http://www.heep.edu.eg/about-heep.htm

Hwang, J. S., & Gerami, M. (2006). Analysis of investment in knowledge inside OECD countries. *International Journal of Social Sciences*, *1*(2), 102-107. Retrieved from Google Scholar.

Jibril, M. (2004). How to construct a knowledge society: The World Bank's new challenges for tertiary education. *Journal of Higher Education in Africa*, *2*(3), 133-138. Retrieved from Google Scholar.

Ketels, C. H., & Memedovic, O. (2008). From clusters to cluster-based economic development. *International Journal of Technological Learning, Innovation and Development*, *1*(3), 375-392. Retrieved from Google Scholar: http://54.83.53.228/sites/default/files/files/resource/From_clusters_to_cluster-based_economic_development.pdf

Kim, S., & Lee, J. -H. (2006). Changing facets of Korean higher education: Market competition and the role of the state. *Higher Education*, *52*, 557-587. Retrieved from SpringerLink.

King, R. (2011). Globalisation and higher education. In J. Brennan & T. Shah (Eds.), *Higher education and society in changing times: Looking back and looking forward.* Boston: Center for Higher Education Research and Information, CHERI. Retrieved from WorldCat: https://www.open.ac.uk/cheri/documents/Lookingbackandlookingforward.pdf

Kirby, D., & Ibrahim, N. (2012). An enterprise revolution for Egyptian universities. *Education, Business and Society: Contemporary Middle Eastern Issues*, *5*(2), 98-111. Retrieved from Google Scholar.

Korb, K. A. (2013). Conducting educational research. *Educational psychology* [Web page]. Retrieved from korbedpsych.com: http://korbedpsych.com/R00Steps.html

Kozma, R. B. (2005). National policies that connect ICT-based education reform to economic and social development. *Human Technology*, *1*(2), 117-156. Retrieved from Google Scholar.

Krafft, C., & Assaad, R. (2016). Inequality of opportunity in the labor market for higher education graduates in Egypt and Jordan. In *The Middle East economies in times of transition* (pp. 159-185). Springer.

Lee, J. (2009). Jussi valimaa, oili-helena ylijoki (eds): Cultural perspectives on higher education. *Higher Education*, *58*, 723-724. Retrieved from SpringerLink.

Li, F., Morgan, W. J., & Ding, X. (2008). The expansion of higher education, employment and over-education in china. *International Journal of Educational Development*, *28*(6), 687-697. Retrieved from Google Scholar.

Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. *Qualitative Inquiry*, *1*(3), 275-289. Retrieved from Google Scholar.

Liu, H. (2015). Comparing welch's ANOVA, a Kruskal-Wallis test and traditional ANOVA in case of heterogeneity of variance. Retrieved from Google Scholar.

Mansour, N. (2015). Science teachers' views and stereotypes of religion, scientists and scientific research: A call for scientist--science teacher partnerships to promote inquiry-based learning. *International Journal of Science Education*, *37*(11), 1767-1794. Retrieved from Google Scholar.

Marginson, S. (2007). The public/private divide in higher education: A global revision. *Higher Education*, *53*, 307-333. Retrieved from SpringerLink: http://www.cshe.unimelb.edu.au/people/marginson_docs/HE_2007_public&private.pdf

Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice*, *13*(6), 522-526. Retrieved from Google Scholar: http://fampra.oxfordjournals.org/content/13/6/522.full.pdf

MBRF. (2009). *Arab knowledge report 2009: Towards productive intercommunication for knowledge* (p. 312). Dubai: UNDP. Retrieved from http://www.mbrfoundation.ae/English/Pages/AKR2009.aspx

McCrum-Gardner, E. (2008). Which is the correct statistical test to use? *British Journal of Oral and Maxillofacial Surgery*, *46*(1), 38-41. Retrieved from Google Scholar.

McNamara, J. F. (1994). *Surveys and experiments in education research.* Lancaster, PA: Technomic Publishing Company. Retrieved from Google Scholar.

Merriam, S. (1998). *Qualitative research and case study application in education*. San Francisco: Jossey-Bass Publishers.

Mertens, D. M. (2007). Transformative paradigm mixed methods and social justice. *Journal of Mixed Methods Research*, *1*(3), 212-225. Retrieved from Google Scholar.

Metcalfe, A., & Fenwick, T. (2009). Knowledge for whose society? Knowledge production, higher education, and federal policy in canada. *Higher Education*, *57*, 209-225. Retrieved from SpringerLink.

Metcalfe, J. S. (2010). University and business relations: Connecting the knowledge economy. *Minerva*, *48*(1), 5-33. doi:10.1007/s11024-010-9140-4

Ministry of Higher Education. (2000). *The strategic plan for developing the higher education system* (p. 65) [Web Document]. Cairo: Ministry of Higher Education. Retrieved from http://www.heep.edu.eg/download_center/1.pdf

Mongkhonvanit, J. (2008). *The relationship between university and industry in the knowledge economy: A case study of Thailand's automotive cluster.* PhD. Retrieved from Google Scholar.

Morgan, W. J. (2009). Lifelong learning, entrepreneurship and social development: The role of higher education. Prague: EURASHE. Retrieved from Google Scholar.

Morgan, W. J., & White, I. (2014a). Education for global development reconciling society, state and market. *Grundfragen Und Trends | International*, (1), 38-41. Retrieved from https://www.nottingham.ac.uk/education/documents/research/unesco/selected-publications/education-for-global-development---society,-state-and-market.pdf

Morgan, W. J., & White, I. (2014b). The value of higher education public or private good? *Grundfragen Und Trends | International*, (6), 38-41. Retrieved from https://www.nottingham.ac.uk/education/documents/research/unesco/selected-publications/the-value-of-he.pdf

Morgan, W. J., & Wu, B. (2011). *Higher education reform in China: Beyond the expansion.* London; New York: Routledge.

Mounib, I. (2014, March 8). Higher education in Egypt, the principal challenges. *Daily News Egypt*. Retrieved from www.dailynewsegypt.com: http://www.dailynewsegypt.com/2014/03/08/higher-education-egypt/

Nieuwenhuis, F. J. (2003). Can research into the development of education in post-colonial Africa shape education policies in South Africa? *International Journal of Educational Development, 17*(2), 129-143. doi:10.1016/S0738-0593

Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, Ba and leadership: A unified model of dynamic knowledge creation. *Long Range Planning*, *33*(1), 5-34. Retrieved from Google Scholar.

Norris, P. (2004). Building knowledge societies: The renewal of democratic practices in knowledge societies. *UNESCO World Report*. UNESCO. Retrieved from Google Scholar.

Nowotny, H., Scott, P., & Gibbons, M. (2003). Mode 2 revisited: The new production of knowledge. *Minerva, Special Issue Devoted to the New Production of Knowledge.* Retrieved from Google Scholar.

Oates, T. (2015). Finnish fairy stories. Cambridge: Cambridge Assessment. Retrieved from Cambridge Assessment: http://www.cambridgeassessment.org.uk/Images/207376-finnish-fairy-stories-tim-oates.pdf

OECD. (1996). *The knowledge-based economy* [OCDE/GD(96)102]. Paris: OECD. Retrieved from OECD: http://www.oecd.org/dataoecd/51/8/1913021.pdf

OECD. (2010). *Reviews of National Policies for Education: Higher education in Egypt*. Paris: OECD. Reviews of National Policies for Education. doi:10.1787/9789264084346-en

Olssen, M., & Peters, M. A. (2005). Neoliberalism, higher education and the knowledge economy: From the free market to knowledge capitalism. *Journal of Education Policy*, *20*(3), 313-345. doi:10.1080/02680930500108718

Peters, M. (2001). National education policy constructions of the knowledge economy: Towards a critique. *Journal of Educational Enquiry*, *2*(1), 1-22. Retrieved from Google Scholar.

Raftery, A. E., & Hout, M. (1993). Maximally maintained inequality: Expansion, reform, and opportunity in Irish education, 1921-75. *Sociology of Education*, 41-62. Retrieved from Google Scholar.

Randolph, J. J. (2009). A guide to writing the dissertation literature review. *Practical Assessment, Research & Evaluation*, *14*(13), 1-13. Retrieved from Google Scholar.

Rauch, J. E., & Kostyshak, S. (2009). The three Arab worlds. *The Journal of Economic Perspectives*, *23*(3), 165-188. Retrieved from Google Scholar.

Routio, P. (2007). Exploratory research. *Models in the research process* [Web page]. Retrieved from www2.uiah.fi/projects/metodi/e00.htm: http://www2.uiah.fi/projects/metodi/177.htm

Russell, M. L. (2001). Competing, overlapping, and contradictory agendas: Egyptian education under British occupation, 1882-1922. *Comparative Studies of South Asia, Africa and the Middle East*, *21*(1), 50-60. Retrieved from Google Scholar.

Salem, F., Mourtada, R., & Alshaer, S. (2013). Transforming education in the arab world: Breaking barriers in the age of social learning. *Arab social media report, 5th edition*. Dubai: Dubai School of Government. Retrieved from Dubai School of Government: http://www.arabsocialmediareport.com/UserManagement/PDF/ASMR_5_Report_Final.pdf

Salmi, J. (2003). Constructing knowledge societies: New challenges for tertiary education. *Higher Education in Europe*, *28*(1), 65-69. Retrieved from Google Scholar.

Schiffbauer, M., & Shen, L. (2010). Democracy vs. Dictatorship: Comparing the evolution of economic growth under two political regimes. *Economics of Transition, 18*(1), 59-90. doi:10.1111/j.1468-0351.2009.00371.x

Schoen, L. T. (2011). Conceptual and methodological issues in sociocultural research and theory development in education. In D. M. McInerney, R. A. Walker, & G. A. D. Liem (Eds.), *Sociocultural theories of learning and motivation: Looking back, looking forward* (pp. 11-40). Retrieved from Google Scholar.

Schmider, E., Danay, E., Beyer, L., Bühner, M., & Ziegler, M. (2010). Is it really robust? Reinvestigating the robustness of ANOVA against violations of the normal distribution assumption. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, *6*(4), 147-151. doi:10.1027/1614-2241/a000016

Schutt, R. K. (2012). *Making sense of the social world: Methods of investigation.* SAGE Publications. Retrieved from Google Scholar

Scott, P. (2005). Universities and the knowledge economy. *Minerva, 43*(3), 297-309. doi:10.1007/s11024-005-6510-4

Sharma, R. S., Ng, E. W., Dharmawirya, M., & Keong Lee, C. (2008). Beyond the digital divide: A conceptual framework for analyzing knowledge societies. *Journal of Knowledge Management*, *12*(5), 151-164. Retrieved from Emerald Group Publishing Limited.

Sharma, R. S., Ng, E. W., Dharmawirya, M., & Samuel, E. M. (2009). A policy framework for developing knowledge societies. *Journal of Knowledge Management*, *13*(5), pp. 373-386. doi:10.1108/13673270910988178

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*(2), 63-75. Retrieved from Google Scholar.

Simons, M., Haverhals, B., & Biesta, G. (2007). Introduction: The university revisited. *Studies in Philosophy and Education, 26*(5), 395-404. doi:10.1007/s11217-007-9051-5

Singh, M. (2001). Reinserting the public good into higher education transformation. *KAGISANO Higher Education Discussion Series*, *1*, 8-18. Retrieved from Google Scholar.

Smith, K. H. (2002). *UNU/INTECH Discussion Papers: What is the'knowledge economy'? Knowledge intensity and distributed knowledge bases* (p. 32). United Nations University, Institute for New Technologies. Retrieved from Google Scholar.

Spiliotopoulou, G. (2009). Reliability reconsidered: Cronbach's alpha and paediatric assessment in occupational therapy. *Australian Occupational Therapy Journal*, *56*(3), 150-155. Retrieved from Google Scholar.

Spratt, C., Walker, R., & Robinson, B. (2004). *Practitioner Research and Evaluation Skills Training in Open and Distance Learning: Mixed research methods* (Vol. A5). Commonwealth of Learning. Retrieved from Google Scholar.

SRA. (2003). *Ethical guidelines*. Retrieved from Social Research Association: http://the-sra.org.uk/wp-content/uploads/ethics03.pdf

Stiglitz, E. (1999). Knowledge as a global public good. In I. Kaul, I. Grunberg & M. A. Stern (Eds.), *Global public goods: International cooperation in the 21st century* (pp. 308-325). Oxford: Oxford University Press. Retrieved from Google Scholar.

Strategic Planning Unit. (2010, March 22). Taqrir halit al-ta'lim al-'ali fi misr. [Report on the state of Higher Education in Egypt]. Mutamar i'lan taqrir halit al-ta'lim al-'ali fi misr [Presentation]. Retrieved from http://mhe-spu.org/new/admin/uploads/resources/DrGalal_Presentation_in_arabic-20100330092237.pdf

Survey Design. (2010). Survey design. [Web page]. Retrieved from www.surveysystem.com: http://www.surveysystem.com/sdesign.htm

Tallarida, R. & Murray, R. B. (2012). Mann-Whitney test. In *Manual of pharmacologic calculations: With computer programs* (pp. 149-153). Springer Science & Business Media. Retrieved from Google Scholar.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences.* Sage Publications Inc. Retrieved from Google Scholar.

Teichler, U. (2007). *Global Perspectives on Higher Education: Higher education systems: Conceptual frameworks, comparative perspectives, empirical findings* (Vol. 9). Sense Publishers. Retrieved from Google Scholar.

The 7 Principles of Public Life. (1995). *Government transparency and accountability: The 7 principles of public life.* London: Committee on Standards in Public Life. Retrieved from GOV.UK: https://www.gov.uk/government/publications/the-7-principles-of-public-life/the-7-principles-of-public-life--2

Tilak, J. (2008). Higher education: A public good or a commodity for trade? *Prospects*, *38*, 449-466. Retrieved from SpringerLink.

Trochim, W. M. (2006). Sampling. *Research methods knowledge base* [Web page]. Retrieved from http://www.socialresearchmethods.net/kb/sampling.php

UNDP. (2002). Creating opportunities for future generations. *Arab human development report 2002* (p. 168). New York: UNDP. Retrieved from UNDP: http://www.arab-hdr.org/publications/other/ahdr/ahdr2002e.pdf

UNDP. (2003). Building a knowledge society. *Arab human development report 2003* (p. 210). New York: UNDP. Retrieved from UNDP: http://www.arab-hdr.org/publications/other/ahdr/ahdr2003e.pdf

UNDP. (2010). *Egypt human development report 2010*. Retrieved from Google Scholar.

UNESCO. (2005). Towards knowledge societies. *UNESCO reference works series: UNESCO world report* (Vol. 9, p. 226). Paris: UNESCO. Retrieved from Google Scholar.

UNESCO. (2009). Trends in global higher education: Tracking an academic revolution. In P. G. Altbach, L. Reisberg, & L. E. Rumbley (Eds.), *A report prepared for the UNESCO 2009 world conference on higher education. UNESC.* Paris: UNESCO. Retrieved from UNESCO: http://www.uis.unesco.org/Library/Documents/trends-global-higher-education-2009-world-conference-en.pdf

UNESCO. (2009a). Communique 8th july. *2009 world conference on higher education: The new dynamics of higher education and research for societal change and development*. Unesco Paris. Retrieved from Google Scholar: http://www.unesco.org/fileadmin/MULTIMEDIA/HQ/ED/ED/pdf/WCHE_2009/FINAL%20COMMUNIQUE%20WCHE%202009.pd

University of Exeter. (2011). Good practice in the conduct of research. *Inspiring research* [Web page]. Retrieved from http://www.exeter.ac.uk/research/inspiring/about/goodpractice/

University of Exeter. (n.d.). *Ethics policy*. Retrieved from University of Exeter: http://www.exeter.ac.uk/media/universityofexeter/corporateresponsibility/pdfs/Ethics_Policy.pdf

Using and Interpreting Cronbach's Alpha | University of Virginia Library Research Data Services + Sciences. (2016). [Web page]. Retrieved from data.library.virginia.edu: http://data.library.virginia.edu/using-and-interpreting-cronbachs-alpha/

Vaira, M. (2004). Globalization and higher education organizational change: A framework for analysis. *Higher Education*, *48*(4), 483-510. Retrieved from Google Scholar.

Välimaa, J. & Hoffman, D. (2008). Knowledge society discourse and higher education. *Higher Education, 56*, 265-285. Retrieved from Google Scholar.

Vehovar, V., & Manfreda, K. L. (2011). Overview: Online surveys. In N. Fielding, R. M. Lee, & G. Blank (Eds.), *The SAGE handbook of online research methods* (pp. 176-194). Sage.

VERBI. (2011). *MAXQDA: The art of text analysis*. Marburg: VERBI. Retrieved from WorldCat.

von Zweck, C., Paterson, M., & Pentland, W. (2008). The use of hermeneutics in a mixed methods design. *The Qualitative Report*, *13*(1), 116-134. Retrieved from Google Scholar.

Webster, J. & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS Quarterly*, *26*(2), 13-23. Retrieved from Google Scholar

Wendorf, C. A. (n.d.). Reporting statistics. *Statistics for psychologists: An online textbook* [Web page]. Retrieved from www4.uwsp.edu: http://www4.uwsp.edu/psych/cw/statistics/textbook.htm

Williams, P. J. (2007). Valid knowledge: The economy and the academy. *Higher Education, 54*(4), 511-523. doi:10.1007/s10734-007-9051-y

Williams, R., & Cochrane, A. (2010). The role of higher education in social and cultural transformation. *Higher education and society: A research report* (pp. 20-26). London: Centre for Higher Education Research and Information, The Open University. Retrieved from Google Scholar.

Bank, W. (2002). *Constructing knowledge societies : New challenges for tertiary education.* Washington, DC: World Bank. Retrieved from http://siteresources.worldbank.org/INTAFRREGTOPTEIA/Resources/Constructing_Knowledge_Societies.pdf

World Bank. (2008). The road not traveled: Education reform in the Middle East and North Africa. *MENA development report*. Washington DC: World Bank. Retrieved from Google Scholar.

World Bank. (2010). KI and KEI indexes. *Knowledge assessment methodology* [Web page]. Retrieved from World Bank: http://go.worldbank.org/SDDP3I1T40

World Bank Institute. (2011). Knowledge assessment methodology and knowledge economy index. In *Knowledge for Development Program: Measuring knowledge in the world's economies.* [Pamphlet] World Bank Institute. Retrieved from World Bank.

World Economic Forum (2014). *The global competitiveness report 2014-2015*. Retrieved July 26, 2015, from the World Economic Forum database, http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

World Economic Forum. (2014). The global competitiveness report 2014-2015. Retrieved from World Economic Forum: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf

World Press Freedom Index 2010: Europe Falls From Its Pedestal, No Respite in the Dictatorships. (2010). Paris: Reporters Without Borders. Retrieved from Reporters Without Borders: https://rsf.org/en/world-press-freedom-index-201

World Press Freedom Index 2015: Decline on All Fronts. (2015). Paris: Reporters Without Boarders. Retrieved from Reporters Without Boarders: https://rsf.org/en/news/world-press-freedom-index-2015-decline-all-fronts

Zeng, D. Z. (2006, March). Egypt and knowledge economy: Seizing the opportunity. *WBI training course in collaboration with IDB* [PDF]. Retrieved from World Bank: http://info.worldbank.org/etools/docs/library/232715/VC2_Egypt_KE.pdf

REFORM OF HIGHER EDUCATION WITHIN THE CONTEXT OF THE KNOWLEDGE ECONOMY AND SOCIETAL CHANGE IN EGYPT

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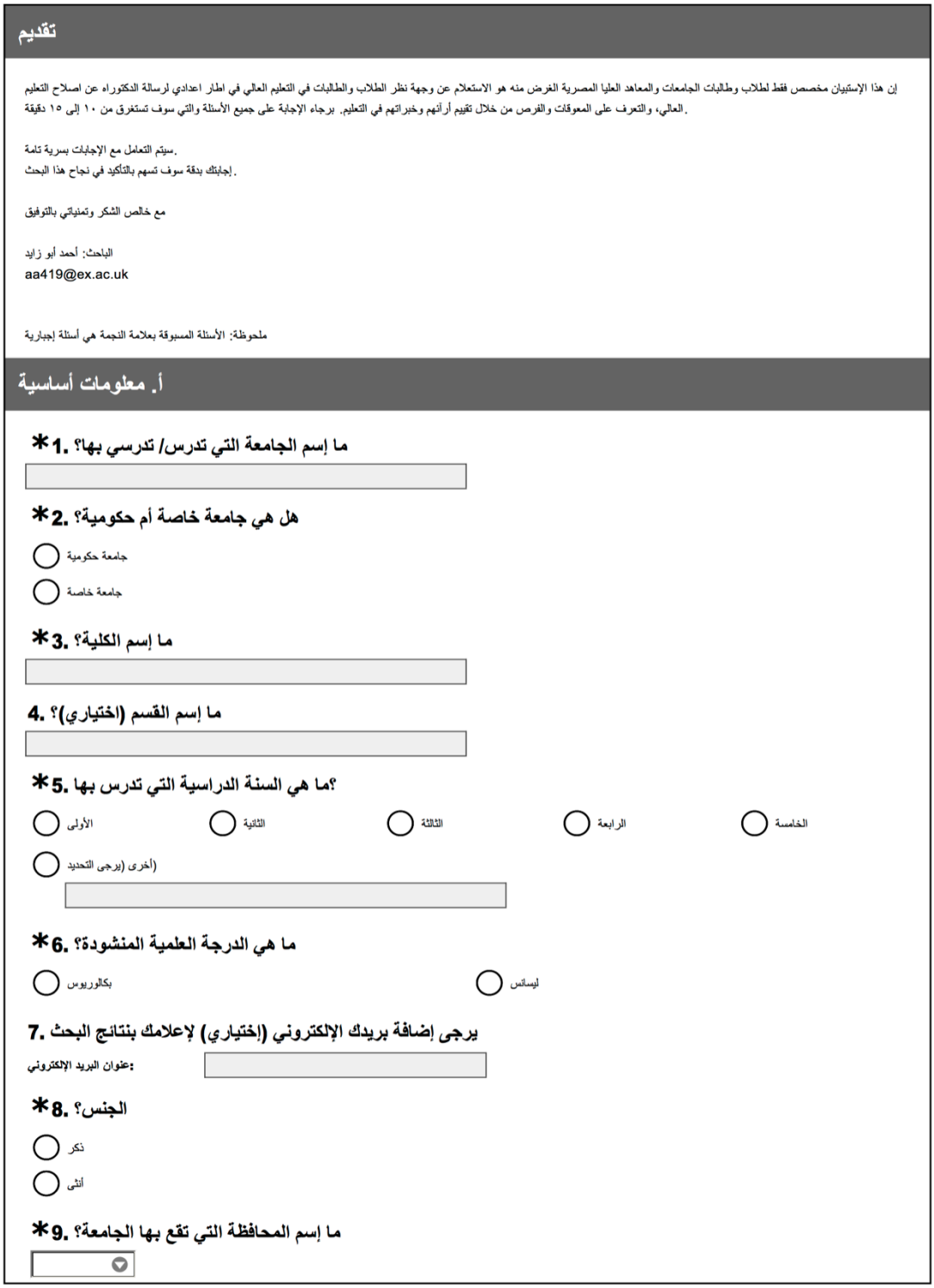
List of Appendices

9.1 UG Questionnaire

9.1.1 ***Arabic***



تقديم

إن هذا الإستبيان مخصص فقط لطلاب وطالبات الجامعات والمعاهد العليا المصرية الغرض منه هو الاستعلام عن وجهة نظر الطلاب والطالبات في التعليم العالي في اطار اعدادي لرسالة الدكتوراه عن اصلاح التعليم العالي، والتعرف على المعوقات والفرص من خلال تقييم أرائهم وخبراتهم في التعليم. برجاء الإجابة على جميع الأسئلة والتي سوف تستغرق من ١٠ إلى ١٥ دقيقة.

سيتم التعامل مع الإجابات بسرية تامة.
إجابتك بدقة سوف تسهم بالتأكيد في نجاح هذا البحث.

مع خالص الشكر وتمنياتي بالتوفيق

الباحث: أحمد أبو زايد
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ملحوظة: الأسئلة المسبوقة بعلامة النجمة هي أسئلة إجبارية

أ. معلومات أساسية

***1. ما إسم الجامعة التي تدرس/ تدرسي بها؟**

***2. هل هي جامعة خاصة أم حكومية؟**

- جامعة حكومية
- جامعة خاصة

***3. ما إسم الكلية؟**

4. ما إسم القسم (اختياري)؟

***5. ما هي السنة الدراسية التي تدرس بها؟**

- الأولى
- الثانية
- الثالثة
- الرابعة
- الخامسة
- أخرى (يرجى التحديد)

***6. ما هي الدرجة العلمية المنشودة؟**

- بكالوريوس
- ليسانس

7. يرجى إضافة بريدك الإلكتروني (إختياري) لإعلامك بنتائج البحث

عنوان البريد الالكتروني:

***8. الجنس؟**

- ذكر
- أنثى

***9. ما إسم المحافظة التي تقع بها الجامعة؟**

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10. هل أنت مغترب/ مغتربة في تلك المحافظة؟

- نعم
- لا

ب. التدريس والدراسة

11.* في إطار المواد الدراسية إلى أي مدى تتفق مع العبارات التالية؟

	وقيماً	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غيرموافقتماماً	لا ينطبق
المواد الدراسية ذات صلة بموضوع دراستي	○	○	○	○	○	○
يمكنني اختيار المواد الدراسية التي أريد دراستها	○	○	○	○	○	○
المواد الدراسية مثيرة للفكر وملهمة	○	○	○	○	○	○
المواد الدراسية يتم تدريسها باللغة الإنجليزية	○	○	○	○	○	○
يُدرَّس الإنجليزية بكفاءة جيدة	○	○	○	○	○	○
أجيد الإنجليزية	○	○	○	○	○	○

12.* في إطار التدريس، إلى أي مدى تتفق مع العبارات التالية؟

	وقيماً	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غيرموافقتماماً
المدرسون جيدون في شرح المواد الدراسية	○	○	○	○	○
المدرسون جعلوا المواد الدراسية سهلة التناول	○	○	○	○	○
أساليب التدريس المستخدمة ساعدتني على التعلم	○	○	○	○	○

13.* هل تستعين بمدرس خصوصي في مادة دراسية واحدة أو أكثر؟

- نعم
- لا

ج. الدروس الخصوصية

14.* ما عدد المواد الدراسية التي تستعين فيها بمدرس خصوصي؟
(إختار رقم ما بين ١ و ١٠)

١ ○ ٢ ○ ٣ ○ ٤ ○ ٥ ○ ٦ ○ ٧ ○ ٨ ○ ٩ ○ ١٠ ○

15.* لماذا تستعين بمدرس خصوصي؟
(إختر كل ما ينطبق)

- ☐ لا أفهم من المحاضرين
- ☐ المواد الدراسية صعبة وغير مفهومة
- ☐ قاعة المحاضرات تكتظ بالطلاب
- ☐ أخرى (يرجى التحديد)

16. - إختياري ما هو تقديرك لحجم ما تنفقه على الدروس الخصوصية في السنة؟
(على سبيل المثال: 7000)

جنيه مصري

د. الدعم الأكاديمي

17.* في إطار الدعم الأكاديمي إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
أحصل على ما أحتاجه من نصيحة ودعم خلال دراستي	○	○	○	○	○
بإمكاني التواصل مع موظفي الكلية/الجامعة وقتما أحتاج إلى ذلك	○	○	○	○	○
البرنامج الدراسي منظم بشكل جيد ويسير بسلاسة	○	○	○	○	○

هـ. التقييم والإختبارات

18.* في إطار التقييم والإختبارات، إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
المعايير المستخدمة في التقييم والإختبارات واضحة	○	○	○	○	○
أسلوب التقييم والتصحيح منصف	○	○	○	○	○
الإمتحانات تختبر مدى الفهم والإستيعاب	○	○	○	○	○
أحصل من المدرسين على تقييم أعمالي وأدائي في خلال زمن مناسب	○	○	○	○	○
أمامي فرص مناسبة للتعبير عن رأيي حول كل جوانب دراستي	○	○	○	○	○
يتم الاستماع إلى آرائي بخصوص دراستي، وتقدّر هذه الآراء	○	○	○	○	○

و. الموارد التعليمية

19.* في إطار الموارد التعليمية، إلى أي مدى تتفق مع العبارات التالية؟

	لا ينطبق	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
موارد المكتبة وخدماتها مناسبة لاحتياجاتي	○	○	○	○	○	○
بإمكاني الوصول إلى موارد تكنولوجيا المعلومات من حاسبات وأجهزة وقتما أحتاج إليها	○	○	○	○	○	○
بإمكاني الوصول إلى الأجهزة المتخصصة والتجهيزات والغرف الخاصة وقتما أحتاج إليها	○	○	○	○	○	○
الموارد التعليمية (كتب، مجلات علمية، ....إلخ) متوفرة، سواء المطبوعة منها أو الالكترونية	○	○	○	○	○	○
استخدم المكتبة الإلكترونية على موقع الجامعة على الانترنت (مقالات، كتب،...الخ) بسهولة	○	○	○	○	○	○

ز. اتحاد الطلاب ورعاية الشباب

20. * في إطار الخدمات والأنشطة، إلى أي مدى تتفق مع العبارات التالية؟

	لا ينطبق	غيرموافق بشدة	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق بشدة
خدمات الرعاية الإجتماعية المقدمة للطلاب بالجامعة جيدة	○	○	○	○	○	○
جامعتكم أو كليتكم خدمات جيدة (سكن، مطاعم،...)	○	○	○	○	○	○
الأنشطة الرياضية التي تنظمها أو تتبناها الجامعة جيدة	○	○	○	○	○	○
الأنشطة الثقافية التي تنظمها أو تتبناها الجامعة جيدة	○	○	○	○	○	○
الأنشطة الاجتماعية التي تنظمها أو تتبناها الجامعة جيدة	○	○	○	○	○	○
الأنشطة الدينية التي تنظمها أو تتبناها الجامعة جيدة	○	○	○	○	○	○
يقدم اتحاد الطلاب خدمات جيدة للطلبة والطالبات	○	○	○	○	○	○
يقدم قسم رعاية الشباب بالجامعة خدمات جيدة للطلبة والطالبات	○	○	○	○	○	○

ح. توقعات فرص العمل

21. * في إطار سوق العمل، إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق بشدة	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق بشدة
توجد امتطلبات العمل	○	○	○	○	○
المؤهل الدراسي العالي يضمن الحصول على فرصة عمل	○	○	○	○	○
جامعتكم أو كليتكم تعزز فرص الحصول على عمل	○	○	○	○	○
الجامعة/الكلية تقدم نصائح وإرشادات تساعد على المنافسة في سوق العمل	○	○	○	○	○
أتطلع إلى فرصة عمل خارج البلاد	○	○	○	○	○
أتطلع إلى فرصة عمل في القطاع الخاص	○	○	○	○	○
أتطلع إلى فرصة عمل بالقطاع العام	○	○	○	○	○
أتطلع إلى عمل مشروع خاص بي	○	○	○	○	○
أفضل أن يكون العمل في مجال تخصصي	○	○	○	○	○

ط. انطباعات عن التعليم العالي

22.* في إطار إنطباعاتك عن التعليم العالي، إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
التعليم العالي في مصر يحتاج إلى إصلاح	○	○	○	○	○
بعد التخرج، ستؤهلني المهارات والمعرفة التي حصلت عليها من خلال التعليم العالي إلى التنافس في سوق العمل .	○	○	○	○	○
لدي خطط محددة لمستقبلي الوظيفي.	○	○	○	○	○
الجامعات الخاصة تقليدية إلى المستوى.	○	○	○	○	○
الجامعات الحكومية تقليدية إلى المستوى.	○	○	○	○	○
فرص العمل المتوقعة لخريجي الجامعات الخاصة أفضل.	○	○	○	○	○
فرص العمل المتوقعة لخريجي الجامعات الحكومية أفضل.	○	○	○	○	○
التعليم العالي الفني يضمن وظائف مرموقة ومرضية .	○	○	○	○	○
يتم معاملة الطلاب باحترام في الجامعة.	○	○	○	○	○
يتم معاملة أعضاء هيئة التدريس باحترام في الجامعة.	○	○	○	○	○
التعليم العالي بمصر له دور أساسي وحيوي في التنمية.	○	○	○	○	○

23.* ما هي أهم ثلاثة أسباب دفعتك لدخولك الجامعة؟

- ☐ تحسين فرص العمل
- ☐ تقصير مدة الخدمة العسكرية
- ☐ تحسين فرص الزواج
- ☐ تحسين صورتي الاجتماعية
- ☐ ضغط اجتماعي أو أسري
- ☐ التواصل الاجتماعي
- ☐ اكتساب المهارات والمعرفة
- ☐ أخرى (يرجى التحديد)

24.* في رأيك، ما هي أهم ثلاث أولويات يجب التركيز عليها لإصلاح التعليم العالي؟

- ☐ أعضاء هيئة التدريس
- ☐ موظفو الجامعة
- ☐ الموارد والمواد التعليمية (كتب، مجلات علمية، ...إلخ)
- ☐ التسهيلات (غرف، معامل، مكتبات، أجهزة تكنولوجيا المعلومات وأجهزة متخصصة)
- ☐ المناهج والموضوعات الدراسية
- ☐ أساليب التدريس والتعليم
- ☐ اتحاد الطلاب ورعاية الشباب والخدمات بشكل عام
- ☐ أخرى ... يرجى التحديد

25.* هل أنت مستعد لدفع رسوم أعلى للدراسة في جامعة حكومية، في مقابل مستوى أعلى من التعليم والخدمات؟

◯ نعم

◯ لا

ك. الرضا عن التعليم العالي بشكل عام

27. هل كنت تتمنى أن تدرس تخصص مُعين ولكن الظروف لم تسمح أو الفرصة لم تسنح؟

◯ لا

(نعم (يرجى التحديد التخصص الذي كنت تود دراسته

28. - إذا تأملت خبرتك في الجامعة، هل هناك جوانب إيجابية أو سلبية بشكل خاص تود إبرازها هنا؟ - إختياري

29.* إلى أي مدى تتفق مع العبارة التالية؟

	موافق بقوة	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غيرموافق بقوة
بشكل عام، أنا راض عن جودة التعليم بالجامعة/ المعهد العالي	◯	◯	◯	◯	◯
بشكل عام، أنا راض عن جودة الخدمات بالجامعة/ المعهد العالي	◯	◯	◯	◯	◯

9.1.2 ***English (translated)***

Introduction

This questionnaire has been created exclusively for the **undergraduate students** of Egyptian universities and higher institutions, with the aim of gathering the students' views on higher education. It is part of my preparation for a PhD dissertation on reforming higher education and identifying the obstacles and areas for improvement by examining the students' views and experience in higher education. Please answer all questions which will take from 10 to 15 minutes.

The answers will remain confidential.

Your honesty will definitely contribute toward the success of this research.

Please accept my warmest thanks and best regards.

Researcher: Ahmad Abu-Zayed

aa419@ex.ac.uk

Note: mandatory questions are preceded by the asterisk sign (*).

A. About you
   1. *What is the name of your university?
   2. *Is it a private or a public university?
      - Private
      - Public
   3. *What is the name of the faculty?
   4. (Optional) What is the name of the department?
   5. *What year are you in?

First	Second	Third	Fourth	Fifth

Other (Please specify)

   6. *What degree are you pursuing?
      - Bachelor
      - Licentiate
   7. If you wish to be notified of the findings of this study, please provide your email below (optional)
      E-mail address:_____
   8. *Gender
      - Male
      - Female
   9. * In which governorate is the university located?
   10. Are you a non-home student in that governorate?
      - No
      - Yes

B. Study Modules

11. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Modules are relevant to my study						
I can choose modules that I want to study						
Modules are intellectually stimulating and inspiring						
Modules are taught in English						
English is adequately taught at university						
My English language skills are good						

12. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Lecturers are proficient in explaining subjects						
Lecturers made modules easy to understand						
Teaching methods helped me to learn						

13. *Do you take private lessons in one or more subjects?

- Yes
- No

C. Private Lessons

14. *How many subjects are you studying with a private tutor (choose from 1 to 10)

1	2	3	4	5	6	7	8	9	10

15. *Why are you using a private tutor? (Choose all that apply)

- I have problem understanding the lecturers
- The subjects are difficult and incomprehensible

- The lecture halls are overcrowded with students
- Others (please specify)_____

16. (Optional) How much do you think you spend on private lessons a year? (e.g. 7000)
    - EGP_____

D. Academic support

17. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
I have received sufficient advice and support with my studies						
I have been able to contact faculty/university staff when I needed to						
The course is well organized and is running smoothly						

E. Assessment and Feedback

18. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
The criteria used in the evaluation are clear						
Marking and assessments are fair						
I get timely feedback on my work/performance						
I have ample opportunities to express my views						
My views are heard and valued						
Exams measure understanding level						

F. Learning Sources

19. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A

Library resources and services meet my needs						
I can access IT facilities whenever I need to						
I can access labs whenever I need to						
Learning resources are available (printed/electronic)						
I use the university e-library						

G. Students' Union, Welfare Resources and Facilities

20. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
The offered social services are good						
University offers good services (accommodation, restaurants, etc.)						
The offered sports activities are good						
The offered cultural activities are good						
The offered social activities are good						
The offered artistic activities are good						
Student union offers good services						
Youth welfare department offers good services						

H. Career Prospects

21. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
I know well the needs of job market						
University degree ensures good job						

prospects						
English language skills boost job prospects						
University offers guidance on job market competition						
I am looking for a work opportunity abroad						
I am looking for a work opportunity in the private sector						
I am looking for a work opportunity in the public sector						
I am looking forward to start my own business						
I prefer to work in my area of specialisation						

I. Thoughts on Higher Education

22. * How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Higher education in Egypt needs reform						
Skills and knowledge gained through higher education will qualify me to compete in job market						
I have clear plans for my career						
Private universities provide quality education						
Public universities provide quality education						
Job prospects are higher for graduates from private universities						
Job prospects are higher for graduates from public universities						
Technical higher education guarantees a						

fulfilling job and career development						
Students are treated with respect in the university environment						
Academics are treated with respect in the university environment						
Higher education has a crucial role for development in Egypt						

23. *What are your top three reasons for enrolling at a university:
    - Cutting short the military service period
    - Enhancing my social image
    - Social networking
    - Gaining knowledge and skills
    - Boosting my job prospects
    - Boosting my marriage prospects
    - Social or family pressure
    - Others (please specify)_____

24. *In your opinion, what should be the three top priorities in the process of reforming higher education:
    - Academic staff
    - Administrative staff
    - Learning resources and tools
    - Facilities (rooms, labs, libraries, IT resources and specialized equipment)
    - Curricula
    - Teaching methods
    - Students' unions and welfare services
    - Others (please specify)_____

25. *Would you be willing to pay higher fees for public universities for a better quality of education and services?
    - Yes
    - No

J.

K. Overall Satisfaction with Higher Education

27. Were you hoping to study a specific major but were not given the chance or the right circumstances to?
    i. No
    ii. Yes (please specify the major you wanted to study)_____

28. If you look back at your university experience, are there any positive or negative points that you would like to highlight in particular? (Optional)

_____

29. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Overall, I'm satisfied with the education quality at the university/higher institution						
Overall, I'm satisfied with the quality of services at the university/higher education institution						

9.2 PG Questionnaire

9.2.1 ***Arabic***

تقديم

إن هذا الإستبيان مخصص فقط لطلاب وطالبات الدراسات العليا بالجامعات المصرية الغرض منه هو الاستعلام عن وجهة نظر طلاب وطالبات الدراسات العليا في التعليم العالي في اطار اعدادي لرسالة الدكتوراه عن اصلاح التعليم العالي، والتعرف على المعوقات والفرص من خلال تقييم أرائهم وخبراتهم في التعليم العالي. برجاء الإجابة على جميع الأسئلة والتي سوف تستغرق من ١٠ إلى ١٥ دقيقة.
سيتم التعامل مع الإجابات بسرية تامة.
إجابتك بدقة سوف تسهم بالتأكيد في نجاح هذا البحث.

مع خالص الشكر وتمنياتي بالتوفيق

الباحث: أحمد أبو زايد
aa419@ex.ac.uk

ملحوظة: الأسئلة المسبوقة بعلامة النجمة هي أسئلة إجبارية

أ. معلومات أساسية

***1. ما إسم الجامعة التي تدرس/ تدرسي بها؟**

***2. هل هي جامعة خاصة أم حكومية؟**

- جامعة حكومية
- جامعة خاصة

***3. ما إسم الكلية؟**

4. ما إسم القسم (اختياري)؟

***5. ما هي الدرجة العلمية المنشودة؟**

- دبلوم دراسات عليا
- ماجستير
- دكتوراه

6. يرجى إضافة بريدك الإلكتروني (إختياري) لإعلامك بنتائج البحث

عنوان البريد الإلكتروني:

***7. الجنس؟**

- ذكر
- أنثى

***8. ما إسم المحافظة التي تقع بها الجامعة؟**

9. هل أنت مغترب/ مغتربة في تلك المحافظة؟

- نعم
- لا

ب. الدراسة

Page 1

10. في إطار المواد الدراسية، إلى أي مدى تتفق مع العبارات التالية؟ *

	وافق تماما	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غير موافق تماما	لا ينطبق
المواد الدراسية ذات صلة بموضوع بحثي	○	○	○	○	○	○
يمكنني اختيار المواد الدراسية التي أريد دراستها	○	○	○	○	○	○
المواد الدراسية مثيرة للفكر وملهمة	○	○	○	○	○	○
المواد الدراسية يتم تدريسها باللغة الإنجليزية	○	○	○	○	○	○
يتم التدريس باللغة الإنجليزية بشكل جيد	○	○	○	○	○	○

11. هل تستعين بمدرس خصوصي في مادة دراسية واحدة أو أكثر؟ *

- ○ نعم
- ○ لا

ج. الدروس الخصوصية

12. ما عدد المواد الدراسية التي تستعين فيها بمدرس خصوصي؟ *
(إختار رقم ما بين ١ و ١٠)

○ ١ ○ ٢ ○ ٣ ○ ٤ ○ ٥ ○ ٦ ○ ٧ ○ ٨ ○ ٩ ○ ١٠

13. لماذا تستعين بمدرس خصوصي؟ *
(إختر كل ما ينطبق)

- ☐ لا أفهم من المحاضرين
- ☐ المواد الدراسية صعبة وغير مفهومة
- ☐ قاعة المحاضرات تكتظ بالطلاب
- ☐ أخرى ... يرجى ذكرها

14. ما هو تقديرك لحجم ما تنفقه على الدروس الخصوصية في السنة؟ - إختياري -
(على سبيل المثال: 7000)

جنيه مصري

د. البحوث

15.* في إطار البحوث، إلى أي مدى تتفق مع العبارات التالية؟

	لا ينطبق	غيرموافقبشدة	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	وافقبشدة
الدكتور المشرف على بحثي يحسن إرشادي في البحث	○	○	○	○	○	○
النصائح التي يقدمها لي الدكتور المشرف وثيقة الصلة بموضوع بحثي	○	○	○	○	○	○
الدكتور المشرف يساعدني على القيام ببحثي	○	○	○	○	○	○
لدي فرص كافية لمناقشة بحثي	○	○	○	○	○	○
عندي ثقة في مهاراتي البحثية	○	○	○	○	○	○
أجيد اللغة الإنجليزية	○	○	○	○	○	○

هـ. الدعم الأكاديمي

16.* في إطار الدعم الأكاديمي، إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافقبشدة	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	وافقبشدة
أحصل على ما أحتاجه من نصيحة ودعم خلال دراستي	○	○	○	○	○
بإمكاني التواصل مع موظفي الكلية/الجامعة وقتما أحتاج إلى ذلك	○	○	○	○	○
البرنامج الدراسي منظم بشكل جيد ويسير بسلاسة	○	○	○	○	○

و. التقييم والإختبارات

17.* في إطار التقييم والإختبارات، إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافقبشدة	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	وافقبشدة
المعايير المستخدمة في التقييم والإختبارات واضحة	○	○	○	○	○
أسلوب التقييم والتصحيح منصف	○	○	○	○	○
أحصل من الدكتور المشرف على تقييم لأعمالي وأدائي في خلال زمن مناسب	○	○	○	○	○
أمامي فرص مناسبة للتعبير عن رأيي حول كل جوانب دراستي	○	○	○	○	○
يتم الاستماع إلى آرائي بخصوص دراستي، وتقدّر هذه الآراء	○	○	○	○	○

ز. الموارد التعليمية

18. في إطار الموارد التعليمية، إلى أي مدى تتفق مع العبارات التالية؟ *

	موافق تماما	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غير موافق تماما	لا ينطبق
موارد المكتبة وخدماتها مناسبة لاحتياجاتي	○	○	○	○	○	○
بإمكاني الوصول إلى موارد تكنولوجيا المعلومات من حاسبات وأجهزة وقتما أحتاج إليها	○	○	○	○	○	○
بإمكاني الوصول إلى الأجهزة المتخصصة والتجهيزات والغرف الخاصة وقتما أحتاج إليها	○	○	○	○	○	○
الموارد التعليمية (كتب، مجلات علمية، ....الخ) متوفرة، سواء المطبوعة منها أو الالكترونية	○	○	○	○	○	○
استخدم المكتبة الإلكترونية على موقع الجامعة على الانترنت (مقالات، كتب،...الخ) بسهولة	○	○	○	○	○	○

ح. اتحاد الطلاب ورعاية الشباب

19. في إطار الخدمات التي تقدمها الجامعة، إلى أي مدى تتفق مع العبارات التالية؟ *

	موافق تماما	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غير موافق تماما	لا ينطبق
خدمات الرعاية الإجتماعية المقدمة للطلاب بالجامعة جيدة	○	○	○	○	○	○
جامعتكم أوتتيح خدمات جيدة (سكن، مطاعم،...)	○	○	○	○	○	○
الأنشطة الرياضية التي تنظمها وتتبناها الجامعة جيدة	○	○	○	○	○	○
الأنشطة الثقافية التي تنظمها وتتبناها الجامعة جيدة	○	○	○	○	○	○
الأنشطة الاجتماعية التي تنظمها وتتبناها الجامعة جيدة	○	○	○	○	○	○
الأنشطة الفنية التي تنظمها وتتبناها الجامعة جيدة	○	○	○	○	○	○
يقدم اتحاد الطلاب خدمات جيدة للطلبة والطالبات	○	○	○	○	○	○
يقدم قسم رعاية الشباب بالجامعة خدمات جيدة للطلبة والطالبات	○	○	○	○	○	○

ط. توقعات فرص العمل

20.* في إطار فرص العمل، إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
وجود متطلبات العمل	○	○	○	○	○
المؤهل الدراسي العالي يضمن الحصول على فرصة عمل	○	○	○	○	○
جائزة التميز تزيد من فرص الحصول على عمل	○	○	○	○	○
الجامعة/الكلية تقدم نصائح وإرشادات تساعد على المنافسة في سوق العمل	○	○	○	○	○
أتطلع إلى فرصة عمل خارج البلاد	○	○	○	○	○
أتطلع إلى فرصة عمل في القطاع الخاص	○	○	○	○	○
أتطلع إلى فرصة عمل بالقطاع العام	○	○	○	○	○
أتطلع إلى عمل مشروع خاص بي	○	○	○	○	○
أفضل أن يكون العمل في مجال تخصصي	○	○	○	○	○

ي. انطباعات عن التعليم العالي

21.* في إطار إنطباعتك عن التعليم العالي، إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
التعليم العالي في مصر يحتاج إلى إصلاح	○	○	○	○	○
بعد التخرج، ستؤهلني المهارات والمعرفة التي حصلت عليها من خلال التعليم العالي إلى التنافس في سوق العمل .	○	○	○	○	○
لدي خطط محددة لمستقبلي الوظيفي.	○	○	○	○	○
الجامعة طالبتقبلي إلى المستوى.	○	○	○	○	○
الجامعة الكبيرة تقبلي إلى المستوى.	○	○	○	○	○
فرص العمل المتوقعة لخريجي الجامعات الخاصة أفضل.	○	○	○	○	○
فرص العمل المتوقعة لخريجي الجامعات الحكومية أفضل.	○	○	○	○	○
التعليم العالي الفني يضمن وظائف مرموقة وراتب مغري .	○	○	○	○	○
يتم معاملة الطلاب باحترام في الجامعة.	○	○	○	○	○
يتم معاملة أعضاء هيئة التدريس باحترام في الجامعة.	○	○	○	○	○
التعليم العالي بمصر له دور أساسي وحيوي في التنمية.	○	○	○	○	○

22. ما هي أهم ثلاثة أسباب دفعتك للدراسات العليا؟ *

- [ ] السعي إلى وظيفة أكاديمية
- [ ] تحسين صورتي الاجتماعية
- [ ] التواصل الاجتماعي
- [ ] اكتساب المهارات والمعرفة
- [ ] تحسين فرص العمل
- [ ] تحسين فرص الزواج
- [ ] ضغط اجتماعي أو أسري
- [ ] لم أجد وظيفة مناسبة
- [ ] أخرى .... يرجى ذكرها

23. في رأيك، ما هي أهم ثلاث أولويات يجب التركيز عليها لإصلاح التعليم العالي؟ *

- [ ] أعضاء هيئة التدريس
- [ ] موظفو الجامعة
- [ ] (الموارد والمواد التعليمية (كتب، مجلات علمية، ...إلخ
- [ ] (التسهيلات (غرف، معامل، مكتبات، أجهزة تكنولوجيا المعلومات وأجهزة متخصصة
- [ ] المناهج والموضوعات الدراسية
- [ ] أساليب التدريس والتعليم
- [ ] اتحاد الطلاب ورعاية الشباب والخدمات بشكل عام
- [ ] أخرى .... يرجى ذكرها

24. هل أنت مستعد لدفع رسوم أعلى للدراسة في جامعة حكومية، في مقابل مستوى أعلى من التعليم والخدمات؟ *

- ○ نعم
- ○ لا

ك. الرضا عن التعليم العالي بشكل عام

26. - إذا تأملت خبرتك في الجامعة، هل هناك جوانب إيجابية أو سلبية بشكل خاص تود إبرازها هنا؟ - إختياري

27.* إلى أي مدى تتفق مع العبارة التالية؟

	موافق تماما	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غير موافق تماما
بشكل عام، أنا راض عن جودة التعليم بالجامعة/ المعهد العالي	○	○	○	○	○
بشكل عام، أنا راض عن جودة الخدمات بالجامعة/ المعهد العالي	○	○	○	○	○

*9.2.2 **English (translated)***

Introduction

This questionnaire has been created exclusively for the **postgraduate students** of Egyptian universities, with the aim of gathering the students' views on higher education. It is part of my preparation for a PhD dissertation on reforming higher education and identifying the obstacles and areas for improvement by examining the students' views and experience in higher education. Please answer all questions which will take from 10 to 15 minutes.

The answers will remain confidential.

Your honesty will definitely contribute toward the success of this study.

Please accept my warmest thanks and best regards.

Researcher: Ahmad Abu-Zayed

aa419@ex.ac.uk

Note: mandatory questions are preceded by the asterisk sign (*).

A. Basic Information
   1. *What is the name of your university?
   2. *Is it a private or a public university?
      - Private
      - Public
   3. *What is the name of the faculty?
   4. (Optional) What is the name of the department?
   5. *What academic degree are you pursuing?
      - Higher Diploma
      - M.A.
      - PhD
   6. If you wish to be notified of the findings of this study, please provide your email below (optional)
      E-mail address:_____
   7. *Gender
      - Male
      - Female
   8. *Which governorate is the university situated in?
   9. Are you staying outside your home city to study at the university?
      - No
      - Yes

B. Study Subjects
   10. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
The subjects are						

relevant to my research topic						
I can choose the subjects I want to study						
The subjects are intellectually stimulating and inspiring						
The subjects are taught in English						
English teaching at the university is very good						

11. *Do you take private lessons in one or more subjects?
    - Yes
    - No

C. Private Lessons

12. *How many subjects are you studying with a private tutor (choose from 1 to 10)

1	2	3	4	5	6	7	8	9	10

13. *Why are you using a private tutor? (Choose all that apply)
    - I have problem understanding the lecturers
    - The subjects are difficult and incomprehensible
    - The lecture halls are overcrowded with students
    - Others (please specify)_____

14. (Optional) How much do you think you spend on private lessons a year? (e.g. 7000)
    - EGP_____

D. Research

15. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
My supervisor is proficient at guiding me through my research						
The advice my supervisor gives me is closely relevant to my research topic						
My supervisor is helping me carry out						

my research						
My supervisor allocates time to discuss my research						
I have confidence in my research skills						
My English is very good						

E. Academic support

16. *To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
I receive sufficient academic advice and support						
I can contact faculty/university staff when I need support/advice						
Study program is well organized and is running smoothly						

F. Examination and Assessment

17. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Criteria used in the evaluation are clear						
Marking and assessments are fair						
I get timely feedback on my work/performance						
I have ample opportunities to express my views						
My views are heard and valued						

G. Learning Resources

18. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor	Disagree	Strongly disagree	N/A

			disagree			
Library resources and services meet my needs						
I can access IT facilities whenever I need to						
Learning resources are available, whether printed or electronic						
I use the university e-library						
I can access labs whenever I need to						

H. Students' Union, Welfare Resources and Facilities

19. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
The offered social services are good						
University offers good services (accommodation, restaurants, etc.)						
The offered sports activities are good						
The offered cultural activities are good						
The offered social activities are good						
The offered artistic activities are good						
Student union offers good services						
Youth welfare department offers good services						

I. Career Prospects

20. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
I know well the needs of job market						

University degree ensures good job prospects						
English language skills boost job prospects						
University offers guidance on job market competition						
I am looking for a work opportunity abroad						
I am looking for a work opportunity in the private sector						
I am looking for a work opportunity in the public sector						
I am looking forward to start my own business						
I prefer to work in my area of specialisation						

J. Thoughts on Higher Education

21. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Higher education in Egypt needs reform						
Skills and knowledge gained through higher education will qualify me to compete in job market						
I have clear plans for my career						
Private universities provide quality education						
Public universities provide quality education						
Job prospects are higher for graduates from private universities						
Job prospects are higher for graduates from public universities						

Technical higher education guarantees a fulfilling job and career development						
Students are treated with respect in the university environment						
Academics are treated with respect in the university environment						
Higher education has crucial role for development in Egypt						

22. *What are your top three reasons for pursuing postgraduate studies:
    - Establishing an academic career
    - Enhancing my social image
    - Social networking
    - Gaining knowledge and skills
    - Boosting my job prospects
    - Boosting my marriage prospects
    - Social or family pressure
    - Failing to find an appropriate job
    - Others (please specify)_____

23. *In your opinion, what should be the three top priorities in the process of reforming higher education:
    - Academic staff
    - University employees
    - Learning resources
    - Facilities (rooms, labs, libraries, IT)
    - Curricula
    - Teaching methods
    - Student unions and welfare services
    - Others (please specify)_____

24. *Would you be willing to pay higher fees for public universities for a better quality of education and services?
    - Yes
    - No

K.

L. Overall Satisfaction with Higher Education

26. If you look back at your university experience, are there any positive or negative points that you would like to highlight in particular? (Optional)

27. * To what extent do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Overall, I'm satisfied with the education quality at the university/higher institution						
Overall, I'm satisfied with the quality of services at the university/higher education institution						

9.3 Academic Questionnaire

9.3.1 ***Arabic***

تقديم

إن هذا الإستبيان مخصص فقط لأعضاء هيئة التدريس بالجامعات المصرية الغرض منه هو الاستعلام عن وجهة نظر أعضاء هيئة التدريس في التعليم العالي في اطار اعدادي لرسالة الدكتوراه عن اصلاح التعليم العالي، والتعرف على المعوقات والفرص من خلال تقييم أرائهم وخبراتهم في التعليم. برجاء الإجابة على جميع الأسئلة والتي سوف تستغرق من ١٠ إلى ١٥ دقيقة.

سيتم التعامل مع الإجابات بسرية تامة.
إجابتك بدقة سوف تسهم بالتأكيد في نجاح هذا البحث.

مع خالص الشكر وتمنياتي بالتوفيق

الباحث: أحمد أبو زايد
aa419@ex.ac.uk

ملحوظة: الأسئلة المسبوقة بعلامة النجمة هي أسئلة إجبارية

أ. معلومات أساسية

***1. ما إسم الجامعة التي تنتمي إليها؟**

***2. هل هي جامعة خاصة أم حكومية؟**

- جامعة حكومية
- جامعة خاصة

***3. ما إسم الكلية؟**

4. ما إسم القسم (اختياري)؟

***5. ما هي درجتك العلمية؟**

- مُعيد
- مدرس مساعد
- مدرس
- مُتقاعد
- أستاذ
- أخرى ... يرجى ذكرها

6. يرجى إضافة بريدك الإلكتروني (إختياري) لإعلامك بنتائج البحث

عنوان البريد الإلكتروني:

***7. الجنس؟**

- ذكر
- أنثى

***8. ما إسم المحافظة التي تقع بها الجامعة؟**

Page 1

9. هل تقوم بالتدريس في جامعات أخرى؟

- لا
- نعم ... يرجى ذكر أسماء الجامعات

ب. التدريس والبحث

***10. في إطار التدريس والبحث إلى أي مدى تتفق مع العبارات التالية؟**

	محايد	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غيرموافق تماما	لا ينطبق
لدي الوقت الكافي لمتابعة أبحاثي						
لدي التمويل الكافي لمتابعة أبحاثي						
المواد التي أدرسها مثيرة للفكر وملهمة						
المواد التي أدرسها ذات صلة وتضيف قيمة للتخصص						
أساليب التدريس المستخدمة في الجامعة/الكلية متطورة						
يوجد مجموعة متنوعة من المواد الدراسية الإختيارية متاحة للطلاب						
البرنامج الدراسي منظم بشكل جيد ويسير بسلاسة						
عدد ساعات التدريس المخصصة لي مناسبة						
تقريرا عمنلبيمن طلب الدراسات العليا						
عندي ثقة في مهارات الطلاب البحثية						

***11. هل تعطي دروس خصوصية للطلاب؟**

- لا
- نعم ... يرجى تحديد عدد الساعات في الأسبوع

د. التواصل

***12. في إطار التواصل مع الطلاب إلى أي مدى تتفق مع العبارات التالية؟**

	محايد	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غيرموافق تماما	لا ينطبق
أقدم النصيحة والدعم لطلبتي بشكل كافي						
أتواصل مع طلبتي بشكل منتظم						
أستقطع وقت كافي من أجل المناقشات مع طلبتي						
النظام الجامعي يوفر للطلبة فرص للتعبير عن رأيهم حول كل جوانب الدراسة						
أستمع وأقدر آراء الطلبة في المواد التي أدرسها						

هـ. التقييم والإختبارات

13.* في إطار التقييم والإختبارات إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
المعايير المستخدمة في التقييم والإختبارات في البداية طلبة					
أسلوب التقييم والتصحيح في الجامعة/الكلية منصف					
الإمتحانات تختبر مدى الفهم والاستيعاب					
أتلقى التعليقات على عمل وأداء طلبتي في خلال زمن مناسب					

و. الموارد التعليمية

14.* في إطار الموارد التعليمية، إلى أي مدى تتفق مع العبارات التالية؟

	لا ينطبق	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
موارد المكتبة وخدماتها مناسبة لاحتياجاتي						
بإمكاني الوصول إلى موارد تكنولوجيا المعلومات من حاسبات وأجهزة وقتما أحتاج إليها						
بإمكاني الوصول إلى الأجهزة المتخصصة والتجهيزات والغرف الخاصة وقتما أحتاج إليها						
الموارد التعليمية (كتب، مجلات علمية، ....الخ) متوفرة، سواء المطبوعة منها أو الالكترونية						
استخدم المكتبة الإلكترونية على موقع الجامعة على الانترنت (مقالات، كتب،...الخ) بانتظام						

ز. سوق العمل

15.* في اطار سوق العمل إلى أي مدى تتفق مع العبارات التالية؟

	غيرموافق تماما	غير موافق إلى حد كبير	لا موافق ولا غير موافق	موافق إلى حد كبير	موافق تماما
المناهج التعليمية والبحثية تتوافق ومتطلبات سوق العمل					
المؤهل الدراسي العالي يضمن للطلبة الحصول على فرصة عمل في مجال التخصص					
الجامعة/الكلية تقدم نصائح وإرشادات تساعد الطلبة على الفهم والمنافسة في سوق العمل					

ح. انطباعات عن التعليم العالي

16. في إطار انطباعاتك عن التعليم العالي إلى أي مدى تتفق مع العبارات التالية؟ *

	محايد	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غير موافق تماما
التعليم العالي في مصر يحتاج إلى إصلاح	○	○	○	○	○
بعد التخرج، الطلبة مؤهلين للمنافسة في سوق العمل	○	○	○	○	○
الجامعات الخاصة تقدم تعليم عالي المستوى	○	○	○	○	○
الجامعات الحكومية تقدم تعليم عالي المستوى	○	○	○	○	○
فرص العمل المتوقعة لخريجي الجامعات الخاصة أفضل	○	○	○	○	○
فرص العمل المتوقعة لخريجي الجامعات الحكومية أفضل	○	○	○	○	○
التعليم العالي الفني يضمن وظائف مُرْتَفِعَة الرَّاتِب	○	○	○	○	○
يتم معاملة الطلاب باحترام في الجامعة	○	○	○	○	○
يتم معاملة أعضاء هيئة التدريس باحترام في الجامعة	○	○	○	○	○
حالياً التعليم العالي يقوم بدور في التنمية	○	○	○	○	○
مرتبات أعضاء هيئة التدريس مناسبة	○	○	○	○	○

17. ما هو دور التعليم العالي في مصر، برجاء إختيار أهم ثلاثة أدوار؟ *

- ☐ خدمة المجتمع
- ☐ التعليم
- ☐ البحث العلمي
- ☐ التأهيل لسوق العمل
- ☐ ترسيخ مبادئ الحرية والديموقراطية
- ☐ أخرى (يرجى التحديد)

18. في رأيك، ما هي أهم ثلاث أولويات يجب التركيز عليها لإصلاح التعليم العالي؟ *

- ☐ أعضاء هيئة التدريس
- ☐ موظفو الجامعة
- ☐ الموارد والمواد التعليمية (كتب، مجلات علمية، ...إلخ)
- ☐ التسهيلات (غرف، معامل، مكتبات، أجهزة تكنولوجيا المعلومات وأجهزة متخصصة)
- ☐ المناهج والموضوعات الدراسية
- ☐ أساليب التدريس والتعليم
- ☐ اتحاد الطلاب ورعاية الشباب والخدمات بشكل عام
- ☐ أخرى (يرجى التحديد)

19. في رأيك، ما أهم المشاكل المُلحة في التعليم العالي بمصر حالياً؟

20.* هل تعتقد أن الطلبة يجب أن يدفعوا رسوماً على للدراسة في الجامعات الحكومية، في مقابل مستوى أعلى من التعليم والخدمات؟

- نعم
- لا

ط. الرضا عن التعليم العالي بشكل عام

22.* إلى أي مدى تتفق مع العبارة التالية؟

	وافق بشدة	موافق إلى حد كبير	لا موافق ولا غير موافق	غير موافق إلى حد كبير	غيرموافق بشدة
بشكل عام، أنا راض عن جودة التعليم بالجامعة/ المعهد العالي					
برنامج ضمان الجودة لوزارة التعليم العالي أسهم في تطوير التعليم العالي					
هناك ثقة واحترام متبادلان بين أعضاء هيئة التدريس والطلبة					
إصلاح التعليم العالي على قائمة أولويات الحكومة					
هناك إرادة سياسية لإصلاح التعليم العالي					
التغيرات السياسية في مصر بعد الثورة سيكون لها أثر إيجابي في إصلاح التعليم العالي					
هناك مسارات ممكنة لإصلاح التعليم العالي دون الحاجة لتأمين استثمارات ضخمة					
الحرية والديموقراطية شرطان أساسيان لإصلاح التعليم العالي					

23. هل هناك جوانب إيجابية للتعليم العالي الحالي؟

- ☐ لا
- ☐ نعم ... يرجى تحديد هذه الجوانب

*9.3.2 **English (translated)***

Introduction

This questionnaire has been created exclusively for the **academic staff** of Egyptian universities with the aim of gathering the academic staff's views on higher education. It is part of my preparation for a PhD dissertation on reforming higher education and identifying the obstacles and areas for improvement by examining the staff's views and experience in teaching. Please answer all questions which will take from 10 to 15 minutes.

The answers will remain confidential.

Your honesty will definitely contribute toward the success of this study.

Please accept my warmest thanks and best regards.

Researcher: Ahmad Abu-Zayed

aa419@ex.ac.uk

Note: mandatory questions are preceded by the asterisk sign (*).

A. Basic Information
    1. *What is the name of your university?
    2. *Is it a private or a public university?
        - Private
        - Public
    3. *What is the name of the faculty?
    4. (Optional) What is the name of the department?
    5. *What degree are you holding?
        - Professor
        - Assistant professor
        - Lecturer
        - Assistant Lecturer
        - Teaching Assistant
        - Others (please specify)_____
    6. If you wish to be notified of the findings of this study, please provide your email below (optional)
       E-mail address:_____
    7. *Gender
        - Male
        - Female
    8. *Which governorate is the university situated in?
    9. Do you teach at other universities?
        - No
        - Yes (please state the names of the universities)_____

B. Teaching and Research
    12. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
I have enough time to pursue my research						
I have enough funds to pursue my research						
The subjects I teach are intellectually stimulating and inspiring						
The subjects I teach are relevant and add value to my specialization						
The university/faculty adopts advanced pedagogy						
The students can choose from a variety of elective subjects						
The teaching program is well organized and running smoothly						
The number of teaching hours allocated for me are appropriate						
I supervise an appropriate number of research students						
I have confidence in the students' research skills						

13. *Do you give private tuition to students?
    - No
    - Yes (state the number of hours per week)_____

C. Communication

15. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
I provide ample advice and support to students						
I communicate with my students on a regular basis						

I give enough time for discussions with my students						
University system avails students to express their views						
I listen and value students' opinion						

D. Assessment and Feedback

13. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
The criteria used in the evaluation have been made clear from the beginning						
The university adopts fair evaluation and assessment methods						
The tests measure the level of understanding and comprehension						
I give my students timely feedback on their work and performance						

E. Learning Sources

14. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
The library's resources and services are sufficient for my needs						
I can access general IT sources, whether computers or otherwise, whenever I need to						
Learning sources (books, scientific magazines, etc.) are available, whether printed or electronic						

I use the university's online resources (articles, books, etc.)						

F. Job Market

15. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Study and research curricula match the needs of job market						
Higher academic degrees ensure career opportunities for students						
University offers guidance on job market competition						

G. Thoughts on Higher Education

16. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Higher education in Egypt needs reform						
Skills and knowledge gained through higher education qualify students to compete in job market						
Private universities provide quality education						
Public universities provide quality education						
Job prospects are higher for graduates from private universities						
Job prospects are higher for graduates from public universities						
Technical higher education guarantees a fulfilling job and career						

development						
Students are treated with respect in the university environment						
Academics are treated with respect in the university environment						
The role of higher education is crucial for development						
Academic staff are well paid						

17. *What is the role of higher education in Egypt? Please choose the three most important roles:
    - Community service
    - Education
    - Scientific research
    - Qualification for job market
    - Instilling the principles of freedom and democracy
    - Others (please specify)

18. *In your opinion, what should be the three top priorities in the process of reforming higher education:
    - Academic staff
    - University employees
    - Learning resources and tools (books, scientific magazines, etc.)
    - Facilities (rooms, labs, libraries, IT resources and specialized equipment)
    - Curricula and content
    - Pedagogical and teaching methods
    - Students' unions and welfare services in general
    - Others (please specify)_____

19. In your opinion, what are the most persistent problems in the higher education in Egypt right now?_____

20. *Do you think that students should pay higher fees for public universities for a better quality of education and services?
    - Yes
    - No

21.

H. Overall Satisfaction with Higher Education

22. *How much do you agree with the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	N/A
Overall, I'm satisfied with the education quality at the university/higher institution						
Government's quality assurance program has helped improving higher education						
There are mutual trust and respect between academic staff and students						
Reforming higher education is at the top of the government's priorities						
There is a political will to reform higher education						
Political changes in Egypt following the revolution will have a positive impact on reforming higher education						
There are possible ways to reform higher education without securing enormous investments						
Freedom and democracy are prerequisites for higher education reform						

23. Are there merits to the current higher education system?
    - No
    - Yes (please specify)

9.4 Interviews

9.4.1 Prominent Intellectual Figures Interviews Questions

1. Do you believe the Government of Egypt has a real intention to reform higher education?
2. What is the impact of recent political changes in Egypt on the reform of higher education?
3. Are there possible routes for reforming Higher Education without having to wait to secure large investments or to be in a position to make long-term commitments?
4. What is your vision of higher education in Egypt?
5. Are there prerequisites for the reform of higher education in Egypt? For instance, are freedoms and democracy prerequisites or are they a probable outcome of reform in a developing country like Egypt?
6. How do knowledge production and circulation work within higher education in Egypt?
7. What is the role of higher education in Egypt?
8. Apart from the education and economic dimensions, are there other aspects that need to be considered (e.g. cultural, social) in reforming higher education in Egypt?
9. In your opinion, what are the major problems of higher education in Egypt?
10. What do you think are the main reasons that have led to the deterioration of higher education in Egypt?
11. What are the priorities for reforming higher education in Egypt?

9.4.2 Subject Matter Experts Interviews Questions

1. What is the impact of recent political changes in Egypt on the reform of higher education?
2. Are there possible routes for reforming Higher Education without having to wait to secure large investments or to be in a position to make long-term commitments?
3. Are there prerequisites for the reform of higher education in Egypt? For instance, are freedoms and democracy prerequisites or are they a probable outcome of reform in a developing country like Egypt?
4. Is there a competition between international organisations in leading higher education reformation in the less-developed countries?
5. Do you believe these international organisations have the same internal logic with different strategies, or totally different motivations?
6. None of the identified problems are new to the Egyptian Government, so what is the purpose of the review for both the Egyptian Government and the OECD / the World Bank?
7. How can the recommendations of the OECD Review contribute to sustainable development of Egypt? And how can this contribution be measured?

8. Is there a potential risk that may occur in the reform processes?
9. Are obstacles and opportunities in reforming higher education country-specific?
10. What should be the role of Higher Education in less-developed countries?
11. How can the reform of higher education in Egypt be sustainable?
12. Which model (neo-liberal/state-centric) of reforming higher education for a knowledge economy fits the less-developed countries?
13. What model does the OECD propose for reforming higher education in Egypt?
14. Apart from the education and economic dimensions, are there other aspects that need to be considered (e.g. cultural, social) in reforming higher education in Egypt?
15. What are the priorities for reforming higher education in Egypt?

9.4.3 Officials Interviews Questions

1. What is the national strategy for higher education in Egypt?
2. What is the impact of recent political changes in Egypt on the reform of higher education?
3. Are there possible routes for reforming Higher Education without having to wait to secure large investments or to be in a position to make long-term commitments?
4. Are there prerequisites for the reform of higher education in Egypt? For instance, are freedoms and democracy prerequisites or are they a probable outcome of reform in a developing country like Egypt?
5. None of the identified problems are new to the Egyptian Government, so what is the purpose of the review for both the Egyptian Government and the OECD / the World Bank?
6. How can the recommendations of the OECD Review contribute to sustainable development of Egypt? And how can this contribution be measured?
7. Is there a potential risk that may occur in the reform processes?
8. How can the reform of higher education in Egypt be sustainable?
9. What is the role of higher education in Egypt?
10. Apart from the education and economic dimensions, are there other aspects that need to be considered (e.g. cultural, social) in reforming higher education in Egypt?
11. What are the priorities for reforming higher education in Egypt?

9.5 UG Summary Data Report

Descriptive Statistics

	N							
	Valid	Miss.	*M*	*SE*	*MD*	*SD*	Min.	Max.
UG Q2 University Type	577	0	1.04	.008	1.00	.200	1	2
UG Q5 Studying Year	577	0	2.86	.061	3.00	1.471	1	5
UG Q6 Degree	577	0	1.21	.017	1.00	.410	1	2
UG Q8 Gender	577	0	1.44	.021	1.00	.497	1	2
UG Q10 Non-Home Student	568	9	1.80	.017	2.00	.400	1	2
UG Q11/1 Modules are Relevant	562	15	2.18	.043	2.00	1.019	1	5
UG Q11/2 Choosing Modules	364	213	2.37	.070	2.00	1.331	1	5
UG Q11/3 Modules are Intellectually Stimulating	516	61	2.85	.056	3.00	1.278	1	5
UG Q11/4 Modules are Taught in English	487	90	2.18	.058	2.00	1.279	1	5
UG Q11/5 English is Adequately Taught	481	96	3.01	.065	3.00	1.422	1	5
UG Q11/6 My English Language Skills are Good	538	39	2.19	.045	2.00	1.037	1	5
UG Q12/1 Proficient Lecturers	577	0	2.73	.048	3.00	1.153	1	5
UG Q12/2 Modules Made Easy	577	0	3.10	.052	3.00	1.253	1	5
UG Q12/3 Teaching Methods	577	0	3.41	.056	4.00	1.342	1	5
UG Q13 Private Tuition	577	0	1.76	.018	2.00	.429	1	2
UG Q14 Number Private Tuition Modules	140	437	2.91	.157	2.00	1.856	1	10

UG Q15/1 Do not Understand	104	473	1.00	.000	1.00	.000	1	1
UG Q15/2 Difficult Modules	64	513	2.00	.000	2.00	.000	2	2
UG Q15/3 Crowded Rooms	71	506	3.00	.000	3.00	.000	3	3
UG Q15/4 Other Reasons	23	554	4.00	.000	4.00	.000	4	4
UG Q17/1 Advice and Support for Students	577	0	2.93	.056	3.00	1.346	1	5
UG Q17/2 Communication with University Staff	577	0	2.97	.058	3.00	1.398	1	5
UG Q17/3 Study Program is Well Organised	577	0	3.24	.057	3.00	1.362	1	5
UG Q18/1 Clear Standards and Criteria	577	0	2.97	.054	3.00	1.302	1	5
UG Q18/2 Fair Assessment	577	0	3.15	.054	3.00	1.291	1	5
UG Q18/3 Measuring Level of Understanding	577	0	3.00	.057	3.00	1.365	1	5
UG Q18/4 Timely Feedback	577	0	3.28	.056	3.00	1.349	1	5
UG Q18/5 Opportunity to Express Views	577	0	3.40	.057	4.00	1.361	1	5
UG Q18/6 Feedback is Heard and Valued	577	0	3.53	.058	4.00	1.396	1	5
UG Q19/1 Library Resources and Facilities meet my Needs	495	82	2.67	.057	2.00	1.258	1	5
UG Q19/2 Having Access to General IT Facilities	451	126	2.86	.063	3.00	1.332	1	5
UG Q19/3 Having Access to Labs	429	148	3.15	.064	3.00	1.322	1	5

UG Q19/4 Learning Resources are Available	482	95	2.90	.060	3.00	1.319	1	5
UG Q19/5 Using the Online Library	374	203	3.07	.073	3.00	1.402	1	5
UG Q20/1 Social Services	510	67	2.90	.057	3.00	1.289	1	5
UG Q20/2 University Services	504	73	3.01	.057	3.00	1.278	1	5
UG Q20/3 Sports Activities	506	71	3.03	.056	3.00	1.258	1	5
UG Q20/4 Cultural Activities	515	62	2.93	.054	3.00	1.233	1	5
UG Q20/5 Social Activities	511	66	2.94	.055	3.00	1.240	1	5
UG Q20/6 Art Activities	511	66	2.95	.055	3.00	1.234	1	5
UG Q20/7 Students Union	511	66	2.83	.059	3.00	1.326	1	5
UG Q20/8 Youth welfare	508	69	2.79	.056	3.00	1.272	1	5
UG Q21/1 Familiarity with Job Market	577	0	2.66	.055	2.00	1.324	1	5
UG Q21/2 Higher education degrees guarantee job opportunities	577	0	2.85	.060	3.00	1.444	1	5
UG Q21/3 Language Improve Opportunity	577	0	1.69	.039	1.00	.949	1	5
UG Q21/4 University offers guidance to job market	577	0	3.25	.059	3.00	1.407	1	5
UG Q21/5 Work Opportunity Abroad	577	0	2.14	.057	2.00	1.374	1	5
UG Q21/6 Work Opportunity in Private Sector	577	0	2.08	.048	2.00	1.161	1	5

UG Q21/7 Work Opportunity in Public Sector	577	0	2.60	.057	2.00	1.360	1	5
UG Q21/8 Starting my Own Business	577	0	2.00	.051	2.00	1.216	1	5
UG Q21/9 Working in My Field	577	0	1.40	.033	1.00	.796	1	5
UG Q22/1 Higher education needs reform	577	0	1.24	.025	1.00	.591	1	5
UG Q22/2 Students can compete in job market	577	0	3.18	.056	3.00	1.346	1	5
UG Q22/3 Career Plans	577	0	2.25	.048	2.00	1.156	1	5
UG Q22/4 Private universities offer good education	577	0	2.54	.052	2.00	1.241	1	5
UG Q22/5 Public universities offer good education	577	0	3.20	.052	3.00	1.251	1	5
UG Q22/6 Job prospects for private university graduates	577	0	2.73	.051	3.00	1.226	1	5
UG Q22/7 Job prospects for Public university graduates	577	0	2.95	.050	3.00	1.207	1	5
UG Q22/8 Job prospects for Technical HE graduates	577	0	2.86	.047	3.00	1.137	1	5
UG Q22/9 Students are Treated with Respect	577	0	2.96	.055	3.00	1.313	1	5
UG Q22/10 Academics are Treated with Respect	577	0	1.94	.039	2.00	.941	1	5
UG Q22/11 HE Serves a Vital Role	577	0	2.31	.056	2.00	1.335	1	5

UG Q23/1 Military Services	16	561	1.00	.000	1.00	.000	1	1
UG Q23/2 Social Image	329	248	2.00	.000	2.00	.000	2	2
UG Q23/3 Social Networking	201	376	3.00	.000	3.00	.000	3	3
UG Q23/4 Gaining Knowledge	453	124	4.00	.000	4.00	.000	4	4
UG Q23/5 Job Prospects	483	94	5.00	.000	5.00	.000	5	5
UG Q23/6 Marriage Prospects	108	469	6.00	.000	6.00	.000	6	6
UG Q23/7 Family Pressure	59	518	7.00	.000	7.00	.000	7	7
UG Q23/8 Enrolling Other	82	495	8.00	.000	8.00	.000	8	8
UG Q24/1 Academic Staff	366	211	1.00	.000	1.00	.000	1	1
UG Q24/2 Admin Staff	71	506	2.00	.000	2.00	.000	2	2
UG Q24/3 Learning Resources	189	388	3.00	.000	3.00	.000	3	3
UG Q24/4 Facilities	213	364	4.00	.000	4.00	.000	4	4
UG Q24/5 Curricula	401	176	5.00	.000	5.00	.000	5	5
UG Q24/6 Teaching Methods	415	162	6.00	.000	6.00	.000	6	6
UG Q24/7 Union and Welfare	47	530	7.00	.000	7.00	.000	7	7
UG Q24/8 Priorities other	29	548	8.00	.000	8.00	.000	8	8
UG Q25 Increasing Fees	577	0	1.29	.019	1.00	.454	1	2
UG Q27 Prefer Other Major	383	194	1.37	.025	1.00	.484	1	2
UG Q29/1 Satisfaction with the Quality of Education	577	0	3.47	.052	4.00	1.237	1	5
UG Q29/2 Satisfaction with the Quality of Services	577	0	3.46	.052	4.00	1.254	1	5

Frequency Tables

UG Q2 University Type

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	553	95.8	95.8	95.8
	2	24	4.2	4.2	100.0
	Total	577	100.0	100.0	

UG Q5 Studying Year

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	151	26.2	26.2	26.2
	2	127	22.0	22.0	48.2
	3	37	6.4	6.4	54.6
	4	174	30.2	30.2	84.7
	5	88	15.3	15.3	100.0
	Total	577	100.0	100.0	

UG Q6 Degree

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	454	78.7	78.7	78.7
	2	123	21.3	21.3	100.0
	Total	577	100.0	100.0	

UG Q8 Gender

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	321	55.6	55.6	55.6
	2	256	44.4	44.4	100.0
	Total	577	100.0	100.0	

UG Q10 Non-Home Student

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	113	19.6	19.9	19.9
	2	455	78.9	80.1	100.0
	Total	568	98.4	100.0	
Missing	System	9	1.6		
Total		577	100.0		

UG Q11/1 Modules are Relevant

	Frequency	Percent	Valid Percent	Cumulative %

Valid	1	151	26.2	26.9	26.9
	2	251	43.5	44.7	71.5
	3	77	13.3	13.7	85.2
	4	75	13.0	13.3	98.6
	5	8	1.4	1.4	100.0
	Total	562	97.4	100.0	
Missing	System	15	2.6		
Total		577	100.0		

UG Q11/2 Choosing Modules

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	116	20.1	31.9	31.9
	2	120	20.8	33.0	64.8
	3	45	7.8	12.4	77.2
	4	43	7.5	11.8	89.0
	5	40	6.9	11.0	100.0
	Total	364	63.1	100.0	
Missing	System	213	36.9		
Total		577	100.0		

UG Q11/3 Modules are Intellectually Stimulating

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	82	14.2	15.9	15.9
	2	152	26.3	29.5	45.3
	3	110	19.1	21.3	66.7
	4	105	18.2	20.3	87.0
	5	67	11.6	13.0	100.0
	Total	516	89.4	100.0	
Missing	System	61	10.6		
Total		577	100.0		

UG Q11/4 Modules are Taught in English

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	187	32.4	38.4	38.4
	2	154	26.7	31.6	70.0
	3	60	10.4	12.3	82.3
	4	42	7.3	8.6	91.0
	5	44	7.6	9.0	100.0
	Total	487	84.4	100.0	
Missing	System	90	15.6		

Total		577	100.0		

UG Q11/5 English is Adequately Taught

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	86	14.9	17.9	17.9
	2	118	20.5	24.5	42.4
	3	89	15.4	18.5	60.9
	4	81	14.0	16.8	77.8
	5	107	18.5	22.2	100.0
	Total	481	83.4	100.0	
Missing	System	96	16.6		
Total		577	100.0		

UG Q11/6 My English Language Skills are Good

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	144	25.0	26.8	26.8
	2	232	40.2	43.1	69.9
	3	95	16.5	17.7	87.5
	4	49	8.5	9.1	96.7
	5	18	3.1	3.3	100.0
	Total	538	93.2	100.0	
Missing	System	39	6.8		
Total		577	100.0		

UG Q12/1 Proficient Lecturers

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	81	14.0	14.0	14.0
	2	201	34.8	34.8	48.9
	3	128	22.2	22.2	71.1
	4	128	22.2	22.2	93.2
	5	39	6.8	6.8	100.0
	Total	577	100.0	100.0	

UG Q12/2 Modules Made Easy

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	64	11.1	11.1	11.1
	2	142	24.6	24.6	35.7
	3	135	23.4	23.4	59.1
	4	144	25.0	25.0	84.1
	5	92	15.9	15.9	100.0

	Total	577	100.0	100.0	

UG Q12/3 Teaching Methods

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	61	10.6	10.6	10.6
	2	108	18.7	18.7	29.3
	3	100	17.3	17.3	46.6
	4	150	26.0	26.0	72.6
	5	158	27.4	27.4	100.0
	Total	577	100.0	100.0	

UG Q13 Private Tuition

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	140	24.3	24.3	24.3
	2	437	75.7	75.7	100.0
	Total	577	100.0	100.0	

UG Q14 Number Private Tuition Modules

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	31	5.4	22.1	22.1
	2	43	7.5	30.7	52.9
	3	25	4.3	17.9	70.7
	4	18	3.1	12.9	83.6
	5	9	1.6	6.4	90.0
	6	7	1.2	5.0	95.0
	7	3	.5	2.1	97.1
	8	2	.3	1.4	98.6
	10	2	.3	1.4	100.0
	Total	140	24.3	100.0	
Missing	System	437	75.7		
Total		577	100.0		

UG Q15/1 Do not Understand

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	104	18.0	100.0	100.0
Missing	System	473	82.0		
Total		577	100.0		

UG Q15/2 Difficult Modules

	Frequency	Percent	Valid Percent	Cumulative %

Valid	2	64	11.1	100.0	100.0
Missing	System	513	88.9		
Total		577	100.0		

UG Q15/3 Crowded Rooms

		Frequency	Percent	Valid Percent	Cumulative %
Valid	3	71	12.3	100.0	100.0
Missing	System	506	87.7		
Total		577	100.0		

UG Q15/4 Other Reasons

		Frequency	Percent	Valid Percent	Cumulative %
Valid	4	23	4.0	100.0	100.0
Missing	System	554	96.0		
Total		577	100.0		

UG Q17/1 Advice and Support for Students

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	101	17.5	17.5	17.5
	2	150	26.0	26.0	43.5
	3	101	17.5	17.5	61.0
	4	136	23.6	23.6	84.6
	5	89	15.4	15.4	100.0
	Total	577	100.0	100.0	

UG Q17/2 Communication with University Staff

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	104	18.0	18.0	18.0
	2	156	27.0	27.0	45.1
	3	77	13.3	13.3	58.4
	4	135	23.4	23.4	81.8
	5	105	18.2	18.2	100.0
	Total	577	100.0	100.0	

UG Q17/3 Study Program is Well Organised

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	72	12.5	12.5	12.5
	2	129	22.4	22.4	34.8
	3	99	17.2	17.2	52.0
	4	141	24.4	24.4	76.4

	5	136	23.6	23.6	100.0
	Total	577	100.0	100.0	

UG Q18/1 Clear Standards and Criteria

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	81	14.0	14.0	14.0
	2	163	28.2	28.2	42.3
	3	116	20.1	20.1	62.4
	4	126	21.8	21.8	84.2
	5	91	15.8	15.8	100.0
	Total	577	100.0	100.0	

UG Q18/2 Fair Assessment

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	56	9.7	9.7	9.7
	2	158	27.4	27.4	37.1
	3	122	21.1	21.1	58.2
	4	124	21.5	21.5	79.7
	5	117	20.3	20.3	100.0
	Total	577	100.0	100.0	

UG Q18/3 Measuring Level of Understanding

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	89	15.4	15.4	15.4
	2	161	27.9	27.9	43.3
	3	95	16.5	16.5	59.8
	4	124	21.5	21.5	81.3
	5	108	18.7	18.7	100.0
	Total	577	100.0	100.0	

UG Q18/4 Timely Feedback

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	65	11.3	11.3	11.3
	2	130	22.5	22.5	33.8
	3	100	17.3	17.3	51.1
	4	141	24.4	24.4	75.6
	5	141	24.4	24.4	100.0
	Total	577	100.0	100.0	

UG Q18/5 Opportunity to Express Views

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	64	11.1	11.1	11.1
	2	108	18.7	18.7	29.8
	3	100	17.3	17.3	47.1
	4	141	24.4	24.4	71.6
	5	164	28.4	28.4	100.0
	Total	577	100.0	100.0	

UG Q18/6 Feedback is Heard and Valued

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	62	10.7	10.7	10.7
	2	100	17.3	17.3	28.1
	3	88	15.3	15.3	43.3
	4	124	21.5	21.5	64.8
	5	203	35.2	35.2	100.0
	Total	577	100.0	100.0	

UG Q19/1 Library Resources and Facilities meet my Needs

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	96	16.6	19.4	19.4
	2	162	28.1	32.7	52.1
	3	99	17.2	20.0	72.1
	4	87	15.1	17.6	89.7
	5	51	8.8	10.3	100.0
	Total	495	85.8	100.0	
Missing	System	82	14.2		
Total		577	100.0		

UG Q19/2 Having Access to General IT Facilities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	74	12.8	16.4	16.4
	2	141	24.4	31.3	47.7
	3	84	14.6	18.6	66.3
	4	79	13.7	17.5	83.8
	5	73	12.7	16.2	100.0
	Total	451	78.2	100.0	
Missing	System	126	21.8		
Total		577	100.0		

UG Q19/3 Having Access to Labs

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	55	9.5	12.8	12.8
	2	94	16.3	21.9	34.7
	3	101	17.5	23.5	58.3
	4	91	15.8	21.2	79.5
	5	88	15.3	20.5	100.0
	Total	429	74.4	100.0	
Missing	System	148	25.6		
Total		577	100.0		

UG Q19/4 Learning Resources are Available

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	72	12.5	14.9	14.9
	2	150	26.0	31.1	46.1
	3	96	16.6	19.9	66.0
	4	84	14.6	17.4	83.4
	5	80	13.9	16.6	100.0
	Total	482	83.5	100.0	
Missing	System	95	16.5		
Total		577	100.0		

UG Q19/5 Using the Online Library

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	59	10.2	15.8	15.8
	2	94	16.3	25.1	40.9
	3	68	11.8	18.2	59.1
	4	69	12.0	18.4	77.5
	5	84	14.6	22.5	100.0
	Total	374	64.8	100.0	
Missing	System	203	35.2		
Total		577	100.0		

UG Q20/1 Social Services

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	76	13.2	14.9	14.9
	2	142	24.6	27.8	42.7
	3	130	22.5	25.5	68.2
	4	81	14.0	15.9	84.1
	5	81	14.0	15.9	100.0
	Total	510	88.4	100.0	

Missing	System	67	11.6		
Total		577	100.0		

UG Q20/2 University Services

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	66	11.4	13.1	13.1
	2	127	22.0	25.2	38.3
	3	133	23.1	26.4	64.7
	4	94	16.3	18.7	83.3
	5	84	14.6	16.7	100.0
	Total	504	87.3	100.0	
Missing	System	73	12.7		
Total		577	100.0		

UG Q20/3 Sports Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	58	10.1	11.5	11.5
	2	134	23.2	26.5	37.9
	3	135	23.4	26.7	64.6
	4	94	16.3	18.6	83.2
	5	85	14.7	16.8	100.0
	Total	506	87.7	100.0	
Missing	System	71	12.3		
Total		577	100.0		

UG Q20/4 Cultural Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	56	9.7	10.9	10.9
	2	165	28.6	32.0	42.9
	3	127	22.0	24.7	67.6
	4	91	15.8	17.7	85.2
	5	76	13.2	14.8	100.0
	Total	515	89.3	100.0	
Missing	System	62	10.7		
Total		577	100.0		

UG Q20/5 Social Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	62	10.7	12.1	12.1
	2	145	25.1	28.4	40.5

	3	142	24.6	27.8	68.3
	4	85	14.7	16.6	84.9
	5	77	13.3	15.1	100.0
	Total	511	88.6	100.0	
Missing	System	66	11.4		
Total		577	100.0		

UG Q20/6 Art Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	58	10.1	11.4	11.4
	2	151	26.2	29.5	40.9
	3	141	24.4	27.6	68.5
	4	83	14.4	16.2	84.7
	5	78	13.5	15.3	100.0
	Total	511	88.6	100.0	
Missing	System	66	11.4		
Total		577	100.0		

UG Q20/7 Students Union

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	86	14.9	16.8	16.8
	2	156	27.0	30.5	47.4
	3	113	19.6	22.1	69.5
	4	71	12.3	13.9	83.4
	5	85	14.7	16.6	100.0
	Total	511	88.6	100.0	
Missing	System	66	11.4		
Total		577	100.0		

UG Q20/8 Youth welfare

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	81	14.0	15.9	15.9
	2	159	27.6	31.3	47.2
	3	125	21.7	24.6	71.9
	4	71	12.3	14.0	85.8
	5	72	12.5	14.2	100.0
	Total	508	88.0	100.0	
Missing	System	69	12.0		
Total		577	100.0		

UG Q21/1 Familiarity with Job Market

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	126	21.8	21.8	21.8
	2	190	32.9	32.9	54.8
	3	89	15.4	15.4	70.2
	4	101	17.5	17.5	87.7
	5	71	12.3	12.3	100.0
	Total	577	100.0	100.0	

UG Q21/2 Higher education degrees guarantee job opportunities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	134	23.2	23.2	23.2
	2	145	25.1	25.1	48.4
	3	74	12.8	12.8	61.2
	4	121	21.0	21.0	82.1
	5	103	17.9	17.9	100.0
	Total	577	100.0	100.0	

UG Q21/3 Language Improve Opportunity

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	301	52.2	52.2	52.2
	2	213	36.9	36.9	89.1
	3	26	4.5	4.5	93.6
	4	17	2.9	2.9	96.5
	5	20	3.5	3.5	100.0
	Total	577	100.0	100.0	

UG Q21/4 University offers guidance to job market

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	80	13.9	13.9	13.9
	2	129	22.4	22.4	36.2
	3	83	14.4	14.4	50.6
	4	138	23.9	23.9	74.5
	5	147	25.5	25.5	100.0
	Total	577	100.0	100.0	

UG Q21/5 Work Opportunity Abroad

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	265	45.9	45.9	45.9

	2	141	24.4	24.4	70.4
	3	60	10.4	10.4	80.8
	4	45	7.8	7.8	88.6
	5	66	11.4	11.4	100.0
	Total	577	100.0	100.0	

UG Q21/6 Work Opportunity in Private Sector

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	215	37.3	37.3	37.3
	2	209	36.2	36.2	73.5
	3	82	14.2	14.2	87.7
	4	31	5.4	5.4	93.1
	5	40	6.9	6.9	100.0
	Total	577	100.0	100.0	

UG Q21/7 Work Opportunity in Public Sector

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	147	25.5	25.5	25.5
	2	171	29.6	29.6	55.1
	3	104	18.0	18.0	73.1
	4	74	12.8	12.8	86.0
	5	81	14.0	14.0	100.0
	Total	577	100.0	100.0	

UG Q21/8 Starting my Own Business

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	265	45.9	45.9	45.9
	2	168	29.1	29.1	75.0
	3	68	11.8	11.8	86.8
	4	33	5.7	5.7	92.5
	5	43	7.5	7.5	100.0
	Total	577	100.0	100.0	

UG Q21/9 Working in My Field

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	420	72.8	72.8	72.8
	2	110	19.1	19.1	91.9
	3	29	5.0	5.0	96.9
	4	8	1.4	1.4	98.3
	5	10	1.7	1.7	100.0

	Total	577	100.0	100.0	

UG Q22/1 Higher education needs reform

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	472	81.8	81.8	81.8
	2	83	14.4	14.4	96.2
	3	15	2.6	2.6	98.8
	4	3	.5	.5	99.3
	5	4	.7	.7	100.0
	Total	577	100.0	100.0	

UG Q22/2 Students can compete in job market

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	76	13.2	13.2	13.2
	2	129	22.4	22.4	35.5
	3	108	18.7	18.7	54.2
	4	142	24.6	24.6	78.9
	5	122	21.1	21.1	100.0
	Total	577	100.0	100.0	

UG Q22/3 Career Plans

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	174	30.2	30.2	30.2
	2	208	36.0	36.0	66.2
	3	106	18.4	18.4	84.6
	4	55	9.5	9.5	94.1
	5	34	5.9	5.9	100.0
	Total	577	100.0	100.0	

UG Q22/4 Private universities offer good education

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	134	23.2	23.2	23.2
	2	175	30.3	30.3	53.6
	3	148	25.6	25.6	79.2
	4	61	10.6	10.6	89.8
	5	59	10.2	10.2	100.0
	Total	577	100.0	100.0	

UG Q22/5 Public universities offer good education

		Frequency	Percent	Valid Percent	Cumulative %

Valid	1	52	9.0	9.0	9.0
	2	143	24.8	24.8	33.8
	3	127	22.0	22.0	55.8
	4	149	25.8	25.8	81.6
	5	106	18.4	18.4	100.0
	Total	577	100.0	100.0	

UG Q22/6 Job prospects for private university graduates

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	108	18.7	18.7	18.7
	2	152	26.3	26.3	45.1
	3	156	27.0	27.0	72.1
	4	107	18.5	18.5	90.6
	5	54	9.4	9.4	100.0
	Total	577	100.0	100.0	

UG Q22/7 Job prospects for Public university graduates

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	65	11.3	11.3	11.3
	2	163	28.2	28.2	39.5
	3	160	27.7	27.7	67.2
	4	113	19.6	19.6	86.8
	5	76	13.2	13.2	100.0
	Total	577	100.0	100.0	

UG Q22/8 Job prospects for Technical HE graduates

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	69	12.0	12.0	12.0
	2	146	25.3	25.3	37.3
	3	221	38.3	38.3	75.6
	4	77	13.3	13.3	88.9
	5	64	11.1	11.1	100.0
	Total	577	100.0	100.0	

UG Q22/9 Students are Treated with Respect

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	80	13.9	13.9	13.9
	2	176	30.5	30.5	44.4
	3	99	17.2	17.2	61.5
	4	130	22.5	22.5	84.1

	5	92	15.9	15.9	100.0
	Total	577	100.0	100.0	

UG Q22/10 Academics are Treated with Respect

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	204	35.4	35.4	35.4
	2	262	45.4	45.4	80.8
	3	67	11.6	11.6	92.4
	4	31	5.4	5.4	97.7
	5	13	2.3	2.3	100.0
	Total	577	100.0	100.0	

UG Q22/11 HE Serves aVital Role

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	208	36.0	36.0	36.0
	2	164	28.4	28.4	64.5
	3	89	15.4	15.4	79.9
	4	52	9.0	9.0	88.9
	5	64	11.1	11.1	100.0
	Total	577	100.0	100.0	

UG Q23/1 Military Services

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	16	2.8	100.0	100.0
Missing	System	561	97.2		
Total		577	100.0		

UG Q23/2 Social Image

		Frequency	Percent	Valid Percent	Cumulative %
Valid	2	329	57.0	100.0	100.0
Missing	System	248	43.0		
Total		577	100.0		

UG Q23/3 Social Networking

		Frequency	Percent	Valid Percent	Cumulative %
Valid	3	201	34.8	100.0	100.0
Missing	System	376	65.2		
Total		577	100.0		

UG Q23/4 Gaining Knowledge

		Frequency	Percent	Valid Percent	Cumulative %
Valid	4	453	78.5	100.0	100.0
Missing	System	124	21.5		
Total		577	100.0		

UG Q23/5 Job Prospects

		Frequency	Percent	Valid Percent	Cumulative %
Valid	5	483	83.7	100.0	100.0
Missing	System	94	16.3		
Total		577	100.0		

UG Q23/6 Marriage Prospects

		Frequency	Percent	Valid Percent	Cumulative %
Valid	6	108	18.7	100.0	100.0
Missing	System	469	81.3		
Total		577	100.0		

UG Q23/7 Family Pressure

		Frequency	Percent	Valid Percent	Cumulative %
Valid	7	59	10.2	100.0	100.0
Missing	System	518	89.8		
Total		577	100.0		

UG Q23/8 Enrolling Other

		Frequency	Percent	Valid Percent	Cumulative %
Valid	8	82	14.2	100.0	100.0
Missing	System	495	85.8		
Total		577	100.0		

UG Q24/1 Academic Staff

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	366	63.4	100.0	100.0
Missing	System	211	36.6		
Total		577	100.0		

UG Q24/2 Admin Staff

		Frequency	Percent	Valid Percent	Cumulative %
Valid	2	71	12.3	100.0	100.0
Missing	System	506	87.7		
Total		577	100.0		

UG Q24/3 Learning Resources

		Frequency	Percent	Valid Percent	Cumulative %
Valid	3	189	32.8	100.0	100.0
Missing	System	388	67.2		
Total		577	100.0		

UG Q24/4 Facilities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	4	213	36.9	100.0	100.0
Missing	System	364	63.1		
Total		577	100.0		

UG Q24/5 Curricula

		Frequency	Percent	Valid Percent	Cumulative %
Valid	5	401	69.5	100.0	100.0
Missing	System	176	30.5		
Total		577	100.0		

UG Q24/6 Teaching Methods

		Frequency	Percent	Valid Percent	Cumulative %
Valid	6	415	71.9	100.0	100.0
Missing	System	162	28.1		
Total		577	100.0		

UG Q24/7 Union and Welfare

		Frequency	Percent	Valid Percent	Cumulative %
Valid	7	47	8.1	100.0	100.0
Missing	System	530	91.9		
Total		577	100.0		

UG Q24/8 Priorities other

		Frequency	Percent	Valid Percent	Cumulative %
Valid	8	29	5.0	100.0	100.0
Missing	System	548	95.0		
Total		577	100.0		

UG Q25 Increasing Fees

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	410	71.1	71.1	71.1

	2	167	28.9	28.9	100.0
	Total	577	100.0	100.0	

UG Q27 Prefer Other Major

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	241	41.8	62.9	62.9
	2	142	24.6	37.1	100.0
	Total	383	66.4	100.0	
Missing	System	194	33.6		
Total		577	100.0		

UG Q29/1 Satisfaction with the Quality of Education

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	34	5.9	5.9	5.9
	2	124	21.5	21.5	27.4
	3	98	17.0	17.0	44.4
	4	178	30.8	30.8	75.2
	5	143	24.8	24.8	100.0
	Total	577	100.0	100.0	

UG Q29/2 Satisfaction with the Quality of Services

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	42	7.3	7.3	7.3
	2	108	18.7	18.7	26.0
	3	117	20.3	20.3	46.3
	4	163	28.2	28.2	74.5
	5	147	25.5	25.5	100.0
	Total	577	100.0	100.0	

9.5.1 ***UG University Type Crosstabs***

Public University: 1

Private University: 2

UG Q2 University Type * UG Q11/1 Modules are Relevant Cross-tabulation

			UG Q11/1 Modules are Relevant					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	142	240	77	73	7	539
		% within UG Q2 University Type	26.3%	44.5%	14.3%	13.5%	1.3%	100.0 %
	2	Count	9	11	0	2	1	23
		% within UG Q2 University Type	39.1%	47.8%	0.0%	8.7%	4.3%	100.0 %
Total		Count	151	251	77	75	8	562
		% within UG Q2 University Type	26.9%	44.7%	13.7%	13.3%	1.4%	100.0 %

UG Q2 University Type * UG Q11/2 Choosing Modules Cross-tabulation

			UG Q11/2 Choosing Modules					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	107	117	44	43	35	346
		% within UG Q2 University Type	30.9%	33.8%	12.7%	12.4%	10.1%	100.0 %
	2	Count	9	3	1	0	5	18
		% within UG Q2 University Type	50.0%	16.7%	5.6%	0.0%	27.8%	100.0 %
Total		Count	116	120	45	43	40	364
		% within UG Q2 University Type	31.9%	33.0%	12.4%	11.8%	11.0%	100.0 %

UG Q2 University Type * UG Q11/3 Modules are Intellectually Stimulating Cross-tabulation

			UG Q11/3 Modules are Intellectually Stimulating					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	73	147	105	103	67	495
		% within UG Q2 University Type	14.7%	29.7%	21.2%	20.8%	13.5%	100.0 %
	2	Count	9	5	5	2	0	21

		% within UG Q2 University Type	42.9%	23.8%	23.8%	9.5%	0.0%	100.0 %
Total		Count	82	152	110	105	67	516
		% within UG Q2 University Type	15.9%	29.5%	21.3%	20.3%	13.0%	100.0 %

UG Q2 University Type * UG Q11/4 Modules are Taught in English Cross-tabulation

			UG Q11/4 Modules are Taught in English					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	176	149	60	42	40	467
		% within UG Q2 University Type	37.7%	31.9%	12.8%	9.0%	8.6%	100.0 %
	2	Count	11	5	0	0	4	20
		% within UG Q2 University Type	55.0%	25.0%	0.0%	0.0%	20.0%	100.0 %
Total		Count	187	154	60	42	44	487
		% within UG Q2 University Type	38.4%	31.6%	12.3%	8.6%	9.0%	100.0 %

UG Q2 University Type * UG Q11/5 English is Adequately Taught Cross-tabulation

			UG Q11/5 English is Adequately Taught					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	79	113	87	79	102	460
		% within UG Q2 University Type	17.2%	24.6%	18.9%	17.2%	22.2%	100.0 %
	2	Count	7	5	2	2	5	21
		% within UG Q2 University Type	33.3%	23.8%	9.5%	9.5%	23.8%	100.0 %
Total		Count	86	118	89	81	107	481
		% within UG Q2 University Type	17.9%	24.5%	18.5%	16.8%	22.2%	100.0 %

UG Q2 University Type * UG Q11/6 My English Language Skills are Good Cross-tabulation

	UG Q11/6 My English Language Skills are Good					
	1	2	3	4	5	Total

UG Q2 University Type	1	Count	139	224	89	48	16	516
		% within UG Q2 University Type	26.9%	43.4%	17.2%	9.3%	3.1%	100.0 %
	2	Count	5	8	6	1	2	22
		% within UG Q2 University Type	22.7%	36.4%	27.3%	4.5%	9.1%	100.0 %
Total		Count	144	232	95	49	18	538
		% within UG Q2 University Type	26.8%	43.1%	17.7%	9.1%	3.3%	100.0 %

UG Q2 University Type * UG Q12/1 Proficient Lecturers Cross-tabulation

			UG Q12/1 Proficient Lecturers					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	77	188	124	126	38	553
		% within UG Q2 University Type	13.9%	34.0%	22.4%	22.8%	6.9%	100.0 %
	2	Count	4	13	4	2	1	24
		% within UG Q2 University Type	16.7%	54.2%	16.7%	8.3%	4.2%	100.0 %
Total		Count	81	201	128	128	39	577
		% within UG Q2 University Type	14.0%	34.8%	22.2%	22.2%	6.8%	100.0 %

UG Q2 University Type * UG Q12/2 Modules Made Easy Cross-tabulation

			UG Q12/2 Modules Made Easy					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	59	132	130	141	91	553
		% within UG Q2 University Type	10.7%	23.9%	23.5%	25.5%	16.5%	100.0 %
	2	Count	5	10	5	3	1	24
		% within UG Q2 University Type	20.8%	41.7%	20.8%	12.5%	4.2%	100.0 %
Total		Count	64	142	135	144	92	577
		% within UG Q2 University Type	11.1%	24.6%	23.4%	25.0%	15.9%	100.0 %

UG Q2 University Type * UG Q12/3 Teaching Methods Cross-tabulation

			UG Q12/3 Teaching Methods					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	57	100	96	145	155	553
		% within UG Q2 University Type	10.3%	18.1%	17.4%	26.2%	28.0%	100.0%
	2	Count	4	8	4	5	3	24
		% within UG Q2 University Type	16.7%	33.3%	16.7%	20.8%	12.5%	100.0%
Total		Count	61	108	100	150	158	577
		% within UG Q2 University Type	10.6%	18.7%	17.3%	26.0%	27.4%	100.0%

UG Q2 University Type * UG Q13 Private Tuition Cross-tabulation

			UG Q13 Private Tuition		
			1	2	Total
UG Q2 University Type	1	Count	136	417	553
		% within UG Q2 University Type	24.6%	75.4%	100.0%
	2	Count	4	20	24
		% within UG Q2 University Type	16.7%	83.3%	100.0%
Total		Count	140	437	577
		% within UG Q2 University Type	24.3%	75.7%	100.0%

UG Q2 University Type * UG Q15/1 Do not Understand Cross-tabulation

			UG Q15/1 Do not understand	
			1	Total
UG Q2 University Type	1	Count	102	102
		% within UG Q2 University Type	100.0%	100.0%
	2	Count	2	2
		% within UG Q2 University Type	100.0%	100.0%
Total		Count	104	104
		% within UG Q2 University Type	100.0%	100.0%

UG Q2 University Type * UG Q15/2 Difficult Modules Cross-tabulation

			UG Q15/2 Difficult Modules 2	Total
UG Q2 University Type	1	Count	61	61
		% within UG Q2 University Type	100.0%	100.0%
	2	Count	3	3
		% within UG Q2 University Type	100.0%	100.0%
Total		Count	64	64
		% within UG Q2 University Type	100.0%	100.0%

UG Q2 University Type * UG Q15/3 Crowded Rooms Cross-tabulation

			UG Q15/3 Crowded Rooms 3	Total
UG Q2 University Type	1	Count	71	71
		% within UG Q2 University Type	100.0%	100.0%
Total		Count	71	71
		% within UG Q2 University Type	100.0%	100.0%

UG Q2 University Type * UG Q15/4 Other Reasons Cross-tabulation

			UG Q15/4 Other Reasons 4	Total
UG Q2 University Type	1	Count	23	23
		% within UG Q2 University Type	100.0%	100.0%
Total		Count	23	23
		% within UG Q2 University Type	100.0%	100.0%

UG Q2 University Type * UG Q17/1 Advice and Support for Students Cross-tabulation

	UG Q17/1 Advice and Support for Students					
	1	2	3	4	5	Total

UG Q2 University Type	1	Count	91	145	98	132	87	553
		% within UG Q2 University Type	16.5%	26.2%	17.7%	23.9%	15.7%	100.0 %
	2	Count	10	5	3	4	2	24
		% within UG Q2 University Type	41.7%	20.8%	12.5%	16.7%	8.3%	100.0 %
Total		Count	101	150	101	136	89	577
		% within UG Q2 University Type	17.5%	26.0%	17.5%	23.6%	15.4%	100.0 %

UG Q2 University Type * UG Q17/2 Communication with University Staff Cross-tabulation

			UG Q17/2 Communication with University Staff					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	93	148	76	134	102	553
		% within UG Q2 University Type	16.8%	26.8%	13.7%	24.2%	18.4%	100.0 %
	2	Count	11	8	1	1	3	24
		% within UG Q2 University Type	45.8%	33.3%	4.2%	4.2%	12.5%	100.0 %
Total		Count	104	156	77	135	105	577
		% within UG Q2 University Type	18.0%	27.0%	13.3%	23.4%	18.2%	100.0 %

UG Q2 University Type * UG Q17/3 Study Program is Well Organised Cross-tabulation

			UG Q17/3 Study Program is Well Organised					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	64	123	96	138	132	553
		% within UG Q2 University Type	11.6%	22.2%	17.4%	25.0%	23.9%	100.0 %
	2	Count	8	6	3	3	4	24
		% within UG Q2 University Type	33.3%	25.0%	12.5%	12.5%	16.7%	100.0 %
Total		Count	72	129	99	141	136	577
		% within UG Q2 University Type	12.5%	22.4%	17.2%	24.4%	23.6%	100.0 %

UG Q2 University Type * UG Q18/1 Clear Standards and Criteria Cross-tabulation

			UG Q18/1 Clear Standards and Criteria					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	75	156	112	121	89	553
		% within UG Q2 University Type	13.6%	28.2%	20.3%	21.9%	16.1%	100.0 %
	2	Count	6	7	4	5	2	24
		% within UG Q2 University Type	25.0%	29.2%	16.7%	20.8%	8.3%	100.0 %
Total		Count	81	163	116	126	91	577
		% within UG Q2 University Type	14.0%	28.2%	20.1%	21.8%	15.8%	100.0 %

UG Q2 University Type * UG Q18/2 Fair Assessment Cross-tabulation

			UG Q18/2 Fair Assessment					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	52	150	116	121	114	553
		% within UG Q2 University Type	9.4%	27.1%	21.0%	21.9%	20.6%	100.0 %
	2	Count	4	8	6	3	3	24
		% within UG Q2 University Type	16.7%	33.3%	25.0%	12.5%	12.5%	100.0 %
Total		Count	56	158	122	124	117	577
		% within UG Q2 University Type	9.7%	27.4%	21.1%	21.5%	20.3%	100.0 %

UG Q2 University Type * UG Q18/3 Measuring Level of Understanding Cross-tabulation

			UG Q18/3 Measuring Level of Understanding					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	82	154	92	122	103	553
		% within UG Q2 University Type	14.8%	27.8%	16.6%	22.1%	18.6%	100.0 %
	2	Count	7	7	3	2	5	24
		% within UG Q2 University Type	29.2%	29.2%	12.5%	8.3%	20.8%	100.0 %
Total		Count	89	161	95	124	108	577
		% within UG Q2 University Type	15.4%	27.9%	16.5%	21.5%	18.7%	100.0 %

UG Q2 University Type * UG Q18/4 Timely Feedback Cross-tabulation

			UG Q18/4 Timely Feedback					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	61	123	94	137	138	553
		% within UG Q2 University Type	11.0%	22.2%	17.0%	24.8%	25.0%	100.0 %
	2	Count	4	7	6	4	3	24
		% within UG Q2 University Type	16.7%	29.2%	25.0%	16.7%	12.5%	100.0 %
Total		Count	65	130	100	141	141	577
		% within UG Q2 University Type	11.3%	22.5%	17.3%	24.4%	24.4%	100.0 %

UG Q2 University Type * UG Q18/5 Opportunity to Express Views Cross-tabulation

			UG Q18/5 Opportunity to Express Views					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	60	102	95	135	161	553
		% within UG Q2 University Type	10.8%	18.4%	17.2%	24.4%	29.1%	100.0 %
	2	Count	4	6	5	6	3	24
		% within UG Q2 University Type	16.7%	25.0%	20.8%	25.0%	12.5%	100.0 %
Total		Count	64	108	100	141	164	577
		% within UG Q2 University Type	11.1%	18.7%	17.3%	24.4%	28.4%	100.0 %

UG Q2 University Type * UG Q18/6 Feedback is Heard and Valued Cross-tabulation

			UG Q18/6 Feedback is Heard and Valued					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	59	90	86	119	199	553
		% within UG Q2 University Type	10.7%	16.3%	15.6%	21.5%	36.0%	100.0 %
	2	Count	3	10	2	5	4	24
		% within UG Q2 University Type	12.5%	41.7%	8.3%	20.8%	16.7%	100.0 %
Total		Count	62	100	88	124	203	577

		% within UG Q2 University Type	10.7%	17.3%	15.3%	21.5%	35.2%	100.0 %

UG Q2 University Type * UG Q19/1 Library Resources and Facilities meet my Needs Cross-tabulation

			UG Q19/1 Library Resources and Facilities meet my Needs					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	90	152	97	83	51	473
		% within UG Q2 University Type	19.0%	32.1%	20.5%	17.5%	10.8%	100.0 %
	2	Count	6	10	2	4	0	22
		% within UG Q2 University Type	27.3%	45.5%	9.1%	18.2%	0.0%	100.0 %
Total		Count	96	162	99	87	51	495
		% within UG Q2 University Type	19.4%	32.7%	20.0%	17.6%	10.3%	100.0 %

UG Q2 University Type * UG Q19/2 Having Access to General IT Facilities Cross-tabulation

			UG Q19/2 Having Access to General IT Facilities					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	68	136	80	77	71	432
		% within UG Q2 University Type	15.7%	31.5%	18.5%	17.8%	16.4%	100.0 %
	2	Count	6	5	4	2	2	19
		% within UG Q2 University Type	31.6%	26.3%	21.1%	10.5%	10.5%	100.0 %
Total		Count	74	141	84	79	73	451
		% within UG Q2 University Type	16.4%	31.3%	18.6%	17.5%	16.2%	100.0 %

UG Q2 University Type * UG Q19/3 Having Access to Labs Cross-tabulation

			UG Q19/3 Having Access to Labs					
			1	2	3	4	5	Total
UG Q2 University	1	Count	49	89	95	89	87	409

Type		% within UG Q2 University Type	12.0%	21.8%	23.2%	21.8%	21.3%	100.0 %
	2	Count	6	5	6	2	1	20
		% within UG Q2 University Type	30.0%	25.0%	30.0%	10.0%	5.0%	100.0 %
Total		Count	55	94	101	91	88	429
		% within UG Q2 University Type	12.8%	21.9%	23.5%	21.2%	20.5%	100.0 %

UG Q2 University Type * UG Q19/4 Learning Resources are Available Cross-tabulation

			UG Q19/4 Learning Resources are Available					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	68	139	94	83	77	461
		% within UG Q2 University Type	14.8%	30.2%	20.4%	18.0%	16.7%	100.0 %
	2	Count	4	11	2	1	3	21
		% within UG Q2 University Type	19.0%	52.4%	9.5%	4.8%	14.3%	100.0 %
Total		Count	72	150	96	84	80	482
		% within UG Q2 University Type	14.9%	31.1%	19.9%	17.4%	16.6%	100.0 %

UG Q2 University Type * UG Q19/5 Using the Online Library Cross-tabulation

			UG Q19/5 Using the Online Library					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	55	90	66	65	82	358
		% within UG Q2 University Type	15.4%	25.1%	18.4%	18.2%	22.9%	100.0 %
	2	Count	4	4	2	4	2	16
		% within UG Q2 University Type	25.0%	25.0%	12.5%	25.0%	12.5%	100.0 %
Total		Count	59	94	68	69	84	374
		% within UG Q2 University Type	15.8%	25.1%	18.2%	18.4%	22.5%	100.0 %

UG Q2 University Type * UG Q22/1 Higher education needs reform Cross-tabulation

			UG Q22/1 Higher education needs reform					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	451	80	15	3	4	553
		% within UG Q2 University Type	81.6%	14.5%	2.7%	0.5%	0.7%	100.0 %
	2	Count	21	3	0	0	0	24
		% within UG Q2 University Type	87.5%	12.5%	0.0%	0.0%	0.0%	100.0 %
Total		Count	472	83	15	3	4	577
		% within UG Q2 University Type	81.8%	14.4%	2.6%	0.5%	0.7%	100.0 %

UG Q2 University Type * UG Q22/2 Students can compete in job market Cross-tabulation

			UG Q22/2 Students can compete in job market					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	70	122	105	136	120	553
		% within UG Q2 University Type	12.7%	22.1%	19.0%	24.6%	21.7%	100.0 %
	2	Count	6	7	3	6	2	24
		% within UG Q2 University Type	25.0%	29.2%	12.5%	25.0%	8.3%	100.0 %
Total		Count	76	129	108	142	122	577
		% within UG Q2 University Type	13.2%	22.4%	18.7%	24.6%	21.1%	100.0 %

UG Q2 University Type * UG Q22/3 Career Plans Cross-tabulation

			UG Q22/3 Career Plans					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	164	200	100	55	34	553
		% within UG Q2 University Type	29.7%	36.2%	18.1%	9.9%	6.1%	100.0 %
	2	Count	10	8	6	0	0	24
		% within UG Q2 University Type	41.7%	33.3%	25.0%	0.0%	0.0%	100.0 %
Total		Count	174	208	106	55	34	577

		% within UG Q2 University Type	30.2%	36.0%	18.4%	9.5%	5.9%	100.0 %

UG Q2 University Type * UG Q22/4 Private universities offer good education Cross-tabulation

			UG Q22/4 Private universities offer good education					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	126	167	142	60	58	553
		% within UG Q2 University Type	22.8%	30.2%	25.7%	10.8%	10.5%	100.0 %
	2	Count	8	8	6	1	1	24
		% within UG Q2 University Type	33.3%	33.3%	25.0%	4.2%	4.2%	100.0 %
Total		Count	134	175	148	61	59	577
		% within UG Q2 University Type	23.2%	30.3%	25.6%	10.6%	10.2%	100.0 %

UG Q2 University Type * UG Q22/5 Public universities offer good education Cross-tabulation

			UG Q22/5 Public universities offer good education					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	49	134	122	146	102	553
		% within UG Q2 University Type	8.9%	24.2%	22.1%	26.4%	18.4%	100.0 %
	2	Count	3	9	5	3	4	24
		% within UG Q2 University Type	12.5%	37.5%	20.8%	12.5%	16.7%	100.0 %
Total		Count	52	143	127	149	106	577
		% within UG Q2 University Type	9.0%	24.8%	22.0%	25.8%	18.4%	100.0 %

UG Q2 University Type * UG Q22/6 Job prospects for private university graduates Cross-tabulation

	UG Q22/6 Job prospects for private university graduates					
	1	2	3	4	5	Total

UG Q2 University Type	1	Count	103	144	150	103	53	553
		% within UG Q2 University Type	18.6%	26.0%	27.1%	18.6%	9.6%	100.0 %
	2	Count	5	8	6	4	1	24
		% within UG Q2 University Type	20.8%	33.3%	25.0%	16.7%	4.2%	100.0 %
Total		Count	108	152	156	107	54	577
		% within UG Q2 University Type	18.7%	26.3%	27.0%	18.5%	9.4%	100.0 %

UG Q2 University Type * UG Q22/7 Job prospects for Public university graduates Cross-tabulation

			UG Q22/7 Job prospects for Public university graduates					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	59	154	156	111	73	553
		% within UG Q2 University Type	10.7%	27.8%	28.2%	20.1%	13.2%	100.0 %
	2	Count	6	9	4	2	3	24
		% within UG Q2 University Type	25.0%	37.5%	16.7%	8.3%	12.5%	100.0 %
Total		Count	65	163	160	113	76	577
		% within UG Q2 University Type	11.3%	28.2%	27.7%	19.6%	13.2%	100.0 %

UG Q2 University Type * UG Q22/8 Job prospects for Technical HE graduates Cross-tabulation

			UG Q22/8 Job prospects for Technical HE graduates					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	63	140	211	75	64	553
		% within UG Q2 University Type	11.4%	25.3%	38.2%	13.6%	11.6%	100.0 %
	2	Count	6	6	10	2	0	24
		% within UG Q2 University Type	25.0%	25.0%	41.7%	8.3%	0.0%	100.0 %
Total		Count	69	146	221	77	64	577
		% within UG Q2 University Type	12.0%	25.3%	38.3%	13.3%	11.1%	100.0 %

UG Q2 University Type * UG Q22/9 Students are Treated with Respect Cross-tabulation

			UG Q22/9 Students are Treated with Respect					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	72	166	98	126	91	553
		% within UG Q2 University Type	13.0%	30.0%	17.7%	22.8%	16.5%	100.0 %
	2	Count	8	10	1	4	1	24
		% within UG Q2 University Type	33.3%	41.7%	4.2%	16.7%	4.2%	100.0 %
Total		Count	80	176	99	130	92	577
		% within UG Q2 University Type	13.9%	30.5%	17.2%	22.5%	15.9%	100.0 %

UG Q2 University Type * UG Q22/10 Academics are Treated with Respect Cross-tabulation

			UG Q22/10 Academics are Treated with Respect					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	193	250	66	31	13	553
		% within UG Q2 University Type	34.9%	45.2%	11.9%	5.6%	2.4%	100.0 %
	2	Count	11	12	1	0	0	24
		% within UG Q2 University Type	45.8%	50.0%	4.2%	0.0%	0.0%	100.0 %
Total		Count	204	262	67	31	13	577
		% within UG Q2 University Type	35.4%	45.4%	11.6%	5.4%	2.3%	100.0 %

UG Q2 University Type * UG Q22/11 HE Serves aVital Role Cross-tabulation

			UG Q22/11 HE Serves aVital Role					
			1	2	3	4	5	Total
UG Q2 University Type	1	Count	197	155	87	51	63	553
		% within UG Q2 University Type	35.6%	28.0%	15.7%	9.2%	11.4%	100.0 %
	2	Count	11	9	2	1	1	24

	% within UG Q2 University Type	45.8%	37.5%	8.3%	4.2%	4.2%	100.0 %
Total	Count	208	164	89	52	64	577
	% within UG Q2 University Type	36.0%	28.4%	15.4%	9.0%	11.1%	100.0 %

9.5.2 ***UG Degree Crosstabs***

Bachelor Degree: 1

Licence Degree: 2

UG Q6 Degree * UG Q11/1 Modules are Relevant Cross-tabulation

			UG Q11/1 Modules are Relevant					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	103	204	67	61	5	440
		% within UG Q6 Degree	23.4%	46.4%	15.2%	13.9%	1.1%	100.0%
	2	Count	48	47	10	14	3	122
		% within UG Q6 Degree	39.3%	38.5%	8.2%	11.5%	2.5%	100.0%
Total		Count	151	251	77	75	8	562
		% within UG Q6 Degree	26.9%	44.7%	13.7%	13.3%	1.4%	100.0%

UG Q6 Degree * UG Q11/2 Choosing Modules Cross-tabulation

			UG Q11/2 Choosing Modules					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	85	103	38	37	33	296
		% within UG Q6 Degree	28.7%	34.8%	12.8%	12.5%	11.1%	100.0%
	2	Count	31	17	7	6	7	68
		% within UG Q6 Degree	45.6%	25.0%	10.3%	8.8%	10.3%	100.0%
Total		Count	116	120	45	43	40	364
		% within UG Q6 Degree	31.9%	33.0%	12.4%	11.8%	11.0%	100.0%

UG Q6 Degree * UG Q11/3 Modules are Intellectually Stimulating Cross-tabulation

			UG Q11/3 Modules are Intellectually Stimulating					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	57	110	93	91	55	406
		% within UG Q6 Degree	14.0%	27.1%	22.9%	22.4%	13.5%	100.0%
	2	Count	25	42	17	14	12	110

		% within UG Q6 Degree	22.7%	38.2%	15.5%	12.7%	10.9%	100.0%
Total		Count	82	152	110	105	67	516
		% within UG Q6 Degree	15.9%	29.5%	21.3%	20.3%	13.0%	100.0%

UG Q6 Degree * UG Q11/4 Modules are Taught in English Cross-tabulation

			UG Q11/4 Modules are Taught in English					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	160	137	46	25	31	399
		% within UG Q6 Degree	40.1%	34.3%	11.5%	6.3%	7.8%	100.0%
	2	Count	27	17	14	17	13	88
		% within UG Q6 Degree	30.7%	19.3%	15.9%	19.3%	14.8%	100.0%
Total		Count	187	154	60	42	44	487
		% within UG Q6 Degree	38.4%	31.6%	12.3%	8.6%	9.0%	100.0%

UG Q6 Degree * UG Q11/5 English is Adequately Taught Cross-tabulation

			UG Q11/5 English is Adequately Taught					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	65	94	64	69	86	378
		% within UG Q6 Degree	17.2%	24.9%	16.9%	18.3%	22.8%	100.0%
	2	Count	21	24	25	12	21	103
		% within UG Q6 Degree	20.4%	23.3%	24.3%	11.7%	20.4%	100.0%
Total		Count	86	118	89	81	107	481
		% within UG Q6 Degree	17.9%	24.5%	18.5%	16.8%	22.2%	100.0%

UG Q6 Degree * UG Q11/6 My English Language Skills are Good Cross-tabulation

			UG Q11/6 My English Language Skills are Good					
			1	2	3	4	5	Total
UG Q6	1	Count	115	188	68	41	12	424

Degree		% within UG Q6 Degree	27.1%	44.3%	16.0%	9.7%	2.8%	100.0%
	2	Count	29	44	27	8	6	114
		% within UG Q6 Degree	25.4%	38.6%	23.7%	7.0%	5.3%	100.0%
Total		Count	144	232	95	49	18	538
		% within UG Q6 Degree	26.8%	43.1%	17.7%	9.1%	3.3%	100.0%

UG Q6 Degree * UG Q12/1 Proficient Lecturers Cross-tabulation

			UG Q12/1 Proficient Lecturers					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	55	151	112	103	33	454
		% within UG Q6 Degree	12.1%	33.3%	24.7%	22.7%	7.3%	100.0%
	2	Count	26	50	16	25	6	123
		% within UG Q6 Degree	21.1%	40.7%	13.0%	20.3%	4.9%	100.0%
Total		Count	81	201	128	128	39	577
		% within UG Q6 Degree	14.0%	34.8%	22.2%	22.2%	6.8%	100.0%

UG Q6 Degree * UG Q12/2 Modules Made Easy Cross-tabulation

			UG Q12/2 Modules Made Easy					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	38	109	107	131	69	454
		% within UG Q6 Degree	8.4%	24.0%	23.6%	28.9%	15.2%	100.0%
	2	Count	26	33	28	13	23	123
		% within UG Q6 Degree	21.1%	26.8%	22.8%	10.6%	18.7%	100.0%
Total		Count	64	142	135	144	92	577
		% within UG Q6 Degree	11.1%	24.6%	23.4%	25.0%	15.9%	100.0%

UG Q6 Degree * UG Q12/3 Teaching Methods Cross-tabulation

			UG Q12/3 Teaching Methods	Total

			1	2	3	4	5	
UG Q6 Degree	1	Count	38	82	81	126	127	454
		% within UG Q6 Degree	8.4%	18.1%	17.8%	27.8%	28.0%	100.0%
	2	Count	23	26	19	24	31	123
		% within UG Q6 Degree	18.7%	21.1%	15.4%	19.5%	25.2%	100.0%
Total		Count	61	108	100	150	158	577
		% within UG Q6 Degree	10.6%	18.7%	17.3%	26.0%	27.4%	100.0%

UG Q6 Degree * UG Q13 Private Tuition Cross-tabulation

			UG Q13 Private Tuition		
			1	2	Total
UG Q6 Degree	1	Count	118	336	454
		% within UG Q6 Degree	26.0%	74.0%	100.0%
	2	Count	22	101	123
		% within UG Q6 Degree	17.9%	82.1%	100.0%
Total		Count	140	437	577
		% within UG Q6 Degree	24.3%	75.7%	100.0%

UG Q6 Degree * UG Q21/1 Familiarity with Job Market Cross-tabulation

			UG Q21/1 Familiarity with Job Market					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	96	153	57	88	60	454
		% within UG Q6 Degree	21.1%	33.7%	12.6%	19.4%	13.2%	100.0%
	2	Count	30	37	32	13	11	123
		% within UG Q6 Degree	24.4%	30.1%	26.0%	10.6%	8.9%	100.0%
Total		Count	126	190	89	101	71	577
		% within UG Q6 Degree	21.8%	32.9%	15.4%	17.5%	12.3%	100.0%

UG Q6 Degree * UG Q21/2 Higher education degrees guarantee job opportunities Cross-tabulation

			UG Q21/2 Higher education degrees guarantee job opportunities					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	99	112	57	102	84	454
		% within UG Q6 Degree	21.8%	24.7%	12.6%	22.5%	18.5%	100.0 %
	2	Count	35	33	17	19	19	123
		% within UG Q6 Degree	28.5%	26.8%	13.8%	15.4%	15.4%	100.0 %
Total		Count	134	145	74	121	103	577
		% within UG Q6 Degree	23.2%	25.1%	12.8%	21.0%	17.9%	100.0 %

UG Q6 Degree * UG Q21/3 Language Improve Opportunity Cross-tabulation

			UG Q21/3 Language Improve Opportunity					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	237	171	17	12	17	454
		% within UG Q6 Degree	52.2%	37.7%	3.7%	2.6%	3.7%	100.0%
	2	Count	64	42	9	5	3	123
		% within UG Q6 Degree	52.0%	34.1%	7.3%	4.1%	2.4%	100.0%
Total		Count	301	213	26	17	20	577
		% within UG Q6 Degree	52.2%	36.9%	4.5%	2.9%	3.5%	100.0%

UG Q6 Degree * UG Q21/4 University offers guidance to job market Cross-tabulation

			UG Q21/4 University offers guidance to job market					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	54	101	67	117	115	454
		% within UG Q6 Degree	11.9%	22.2%	14.8%	25.8%	25.3%	100.0%
	2	Count	26	28	16	21	32	123
		% within UG Q6 Degree	21.1%	22.8%	13.0%	17.1%	26.0%	100.0%
Total		Count	80	129	83	138	147	577
		% within UG Q6 Degree	13.9%	22.4%	14.4%	23.9%	25.5%	100.0%

UG Q6 Degree * UG Q21/5 Work Opportunity Abroad Cross-tabulation

			UG Q21/5 Work Opportunity Abroad					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	218	116	42	32	46	454
		% within UG Q6 Degree	48.0%	25.6%	9.3%	7.0%	10.1%	100.0%
	2	Count	47	25	18	13	20	123
		% within UG Q6 Degree	38.2%	20.3%	14.6%	10.6%	16.3%	100.0%
Total		Count	265	141	60	45	66	577
		% within UG Q6 Degree	45.9%	24.4%	10.4%	7.8%	11.4%	100.0%

UG Q6 Degree * UG Q21/6 Work Opportunity in Private Sector Cross-tabulation

			UG Q21/6 Work Opportunity in Private Sector					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	173	172	65	23	21	454
		% within UG Q6 Degree	38.1%	37.9%	14.3%	5.1%	4.6%	100.0%
	2	Count	42	37	17	8	19	123
		% within UG Q6 Degree	34.1%	30.1%	13.8%	6.5%	15.4%	100.0%
Total		Count	215	209	82	31	40	577
		% within UG Q6 Degree	37.3%	36.2%	14.2%	5.4%	6.9%	100.0%

UG Q6 Degree * UG Q21/7 Work Opportunity in Public Sector Cross-tabulation

			UG Q21/7 Work Opportunity in Public Sector					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	100	131	81	70	72	454
		% within UG Q6 Degree	22.0%	28.9%	17.8%	15.4%	15.9%	100.0%
	2	Count	47	40	23	4	9	123
		% within UG Q6 Degree	38.2%	32.5%	18.7%	3.3%	7.3%	100.0%
Total		Count	147	171	104	74	81	577
		% within UG Q6 Degree	25.5%	29.6%	18.0%	12.8%	14.0%	100.0%

UG Q6 Degree * UG Q21/8 Starting my Own Business Cross-tabulation

			UG Q21/8 Starting my Own Business					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	216	139	49	21	29	454
		% within UG Q6 Degree	47.6%	30.6%	10.8%	4.6%	6.4%	100.0%
	2	Count	49	29	19	12	14	123
		% within UG Q6 Degree	39.8%	23.6%	15.4%	9.8%	11.4%	100.0%
Total		Count	265	168	68	33	43	577
		% within UG Q6 Degree	45.9%	29.1%	11.8%	5.7%	7.5%	100.0%

UG Q6 Degree * UG Q21/9 Working in My Field Cross-tabulation

			UG Q21/9 Working in My Field					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	334	86	22	3	9	454
		% within UG Q6 Degree	73.6%	18.9%	4.8%	0.7%	2.0%	100.0%
	2	Count	86	24	7	5	1	123
		% within UG Q6 Degree	69.9%	19.5%	5.7%	4.1%	0.8%	100.0%
Total		Count	420	110	29	8	10	577
		% within UG Q6 Degree	72.8%	19.1%	5.0%	1.4%	1.7%	100.0%

UG Q6 Degree * UG Q29/1 Satisfaction with the Quality of Education Cross-tabulation

			UG Q29/1 Satisfaction with the Quality of Education					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	18	94	77	145	120	454
		% within UG Q6 Degree	4.0%	20.7%	17.0%	31.9%	26.4%	100.0%
	2	Count	16	30	21	33	23	123
		% within UG Q6 Degree	13.0%	24.4%	17.1%	26.8%	18.7%	100.0%
Total		Count	34	124	98	178	143	577

		% within UG Q6 Degree	5.9%	21.5%	17.0%	30.8%	24.8%	100.0%

UG Q6 Degree * UG Q29/2 Satisfaction with the Quality of Services Cross-tabulation

			UG Q29/2 Satisfaction with the Quality of Services					
			1	2	3	4	5	Total
UG Q6 Degree	1	Count	26	81	91	132	124	454
		% within UG Q6 Degree	5.7%	17.8%	20.0%	29.1%	27.3%	100.0%
	2	Count	16	27	26	31	23	123
		% within UG Q6 Degree	13.0%	22.0%	21.1%	25.2%	18.7%	100.0%
Total		Count	42	108	117	163	147	577
		% within UG Q6 Degree	7.3%	18.7%	20.3%	28.2%	25.5%	100.0%

9.5.3 *UG Gender Crosstabs*

UG Q8 Gender * UG Q13 Private Tuition Cross-tabulation

			UG Q13 Private Tuition		
			1	2	Total
UG Q8 Gender	1	Count	89	232	321
		% within UG Q8 Gender	27.7%	72.3%	100.0%
	2	Count	51	205	256
		% within UG Q8 Gender	19.9%	80.1%	100.0%
Total		Count	140	437	577
		% within UG Q8 Gender	24.3%	75.7%	100.0%

UG Q8 Gender * UG Q21/1 Familiarity with Job Market Cross-tabulation

			UG Q21/1 Familiarity with Job Market					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	66	114	48	50	43	321
		% within UG Q8 Gender	20.6%	35.5%	15.0%	15.6%	13.4%	100.0%
	2	Count	60	76	41	51	28	256
		% within UG Q8 Gender	23.4%	29.7%	16.0%	19.9%	10.9%	100.0%
Total		Count	126	190	89	101	71	577
		% within UG Q8 Gender	21.8%	32.9%	15.4%	17.5%	12.3%	100.0%

UG Q8 Gender * UG Q21/2 Higher education degrees guarantee job opportunities Cross-tabulation

			UG Q21/2 Higher education degrees guarantee job opportunities					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	66	85	49	65	56	321
		% within UG Q8 Gender	20.6%	26.5%	15.3%	20.2%	17.4%	100.0%
	2	Count	68	60	25	56	47	256
		% within UG Q8 Gender	26.6%	23.4%	9.8%	21.9%	18.4%	100.0%
Total		Count	134	145	74	121	103	577

		% within UG Q8 Gender	23.2%	25.1%	12.8%	21.0%	17.9%	100.0 %

UG Q8 Gender * UG Q21/3 Language Improve Opportunity Cross-tabulation

			UG Q21/3 Language Improve Opportunity					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	163	122	18	9	9	321
		% within UG Q8 Gender	50.8%	38.0%	5.6%	2.8%	2.8%	100.0%
	2	Count	138	91	8	8	11	256
		% within UG Q8 Gender	53.9%	35.5%	3.1%	3.1%	4.3%	100.0%
Total		Count	301	213	26	17	20	577
		% within UG Q8 Gender	52.2%	36.9%	4.5%	2.9%	3.5%	100.0%

UG Q8 Gender * UG Q21/4 University offers guidance to job market Cross-tabulation

			UG Q21/4 University offers guidance to job market					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	36	79	54	79	73	321
		% within UG Q8 Gender	11.2%	24.6%	16.8%	24.6%	22.7%	100.0%
	2	Count	44	50	29	59	74	256
		% within UG Q8 Gender	17.2%	19.5%	11.3%	23.0%	28.9%	100.0%
Total		Count	80	129	83	138	147	577
		% within UG Q8 Gender	13.9%	22.4%	14.4%	23.9%	25.5%	100.0%

UG Q8 Gender * UG Q21/5 Work Opportunity Abroad Cross-tabulation

			UG Q21/5 Work Opportunity Abroad					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	164	87	22	23	25	321
		% within UG Q8 Gender	51.1%	27.1%	6.9%	7.2%	7.8%	100.0%
	2	Count	101	54	38	22	41	256

		% within UG Q8 Gender	39.5%	21.1%	14.8%	8.6%	16.0%	100.0%
Total		Count	265	141	60	45	66	577
		% within UG Q8 Gender	45.9%	24.4%	10.4%	7.8%	11.4%	100.0%

UG Q8 Gender * UG Q21/6 Work Opportunity in Private Sector Cross-tabulation

			UG Q21/6 Work Opportunity in Private Sector					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	120	127	41	20	13	321
		% within UG Q8 Gender	37.4%	39.6%	12.8%	6.2%	4.0%	100.0%
	2	Count	95	82	41	11	27	256
		% within UG Q8 Gender	37.1%	32.0%	16.0%	4.3%	10.5%	100.0%
Total		Count	215	209	82	31	40	577
		% within UG Q8 Gender	37.3%	36.2%	14.2%	5.4%	6.9%	100.0%

UG Q8 Gender * UG Q21/7 Work Opportunity in Public Sector Cross-tabulation

			UG Q21/7 Work Opportunity in Public Sector					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	80	93	57	48	43	321
		% within UG Q8 Gender	24.9%	29.0%	17.8%	15.0%	13.4%	100.0%
	2	Count	67	78	47	26	38	256
		% within UG Q8 Gender	26.2%	30.5%	18.4%	10.2%	14.8%	100.0%
Total		Count	147	171	104	74	81	577
		% within UG Q8 Gender	25.5%	29.6%	18.0%	12.8%	14.0%	100.0%

UG Q8 Gender * UG Q21/8 Starting my Own Business Cross-tabulation

			UG Q21/8 Starting my Own Business					
			1	2	3	4	5	Total
UG Q8	1	Count	157	93	39	14	18	321

Gender		% within UG Q8 Gender	48.9%	29.0%	12.1%	4.4%	5.6%	100.0%
	2	Count	108	75	29	19	25	256
		% within UG Q8 Gender	42.2%	29.3%	11.3%	7.4%	9.8%	100.0%
Total		Count	265	168	68	33	43	577
		% within UG Q8 Gender	45.9%	29.1%	11.8%	5.7%	7.5%	100.0%

UG Q8 Gender * UG Q21/9 Working in My Field Cross-tabulation

			UG Q21/9 Working in My Field					
			1	2	3	4	5	Total
UG Q8 Gender	1	Count	225	69	17	4	6	321
		% within UG Q8 Gender	70.1%	21.5%	5.3%	1.2%	1.9%	100.0%
	2	Count	195	41	12	4	4	256
		% within UG Q8 Gender	76.2%	16.0%	4.7%	1.6%	1.6%	100.0%
Total		Count	420	110	29	8	10	577
		% within UG Q8 Gender	72.8%	19.1%	5.0%	1.4%	1.7%	100.0%

9.5.4 *UG Private Tuition Crosstabs*

UG Q13 Private Tuition * UG Q29/1
Satisfaction with the Quality of Education Cross-tabulation

			UG Q29/1 Satisfaction with the Quality of Education					
			1	2	3	4	5	Total
UG Q13 Private Tuition	1	Count	2	13	21	60	44	140
		% within UG Q13 Private Tuition	1.4%	9.3%	15.0%	42.9%	31.4%	100.0 %
	2	Count	32	111	77	118	99	437
		% within UG Q13 Private Tuition	7.3%	25.4%	17.6%	27.0%	22.7%	100.0 %
Total		Count	34	124	98	178	143	577
		% within UG Q13 Private Tuition	5.9%	21.5%	17.0%	30.8%	24.8%	100.0 %

UG Q13 Private Tuition * UG Q29/2
Satisfaction with the Quality of Services Cross-tabulation

			UG Q29/2 Satisfaction with the Quality of Services					
			1	2	3	4	5	Total
UG Q13 Private Tuition	1	Count	3	16	22	53	46	140
		% within UG Q13 Private Tuition	2.1%	11.4%	15.7%	37.9%	32.9%	100.0 %
	2	Count	39	92	95	110	101	437
		% within UG Q13 Private Tuition	8.9%	21.1%	21.7%	25.2%	23.1%	100.0 %
Total		Count	42	108	117	163	147	577
		% within UG Q13 Private Tuition	7.3%	18.7%	20.3%	28.2%	25.5%	100.0 %

9.6 PG Summary Data Report

Descriptive Statistics

	N						
	Valid	Missing	Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
PG Q2 University Type	233	0	1.03	.012	1.00	.182	1	2
PG Q5 Degree	233	0	1.94	.047	2.00	.714	1	3
PG Q7 Gender	233	0	1.44	.033	1.00	.497	1	2
PG Q9 Non-Home Student	229	4	1.79	.027	2.00	.411	1	2
PG Q10/1 Modules are Relevant	214	19	2.38	.081	2.00	1.180	1	5
PG Q10/2 Choosing Modules	159	74	2.41	.112	2.00	1.415	1	5
PG Q10/3 Modules are Intellectually Stimulating	199	34	2.81	.091	3.00	1.283	1	5
PG Q10/4 Modules are Taught in English	171	62	2.43	.109	2.00	1.427	1	5
PG Q10/5 English is Adequately Taught	167	66	3.22	.104	3.00	1.345	1	5
PG Q11 Private Tuition	233	0	1.93	.017	2.00	.261	1	2
PG Q12 Number Private Tuition Modules	17	216	3.00	.332	3.00	1.369	1	5
PG Q13/1 Do not Understand	12	221	1.00	.000	1.00	.000	1	1
PG Q13/2 Difficult Modules	6	227	2.00	.000	2.00	.000	2	2
PG Q13/3 Crowded Rooms	8	225	3.00	.000	3.00	.000	3	3
PG Q13/4 Other Reasons	6	227	4.00	.000	4.00	.000	4	4
PG Q15/1 Good Supervision	208	25	2.23	.085	2.00	1.226	1	5
PG Q15/2 Relevant Advice	212	21	2.15	.078	2.00	1.141	1	5

PG Q15/3 Supervisor Helps Me	205	28	2.32	.082	2.00	1.169	1	5
PG Q15/4 Supervisor Allocates Time	207	26	2.71	.089	2.00	1.282	1	5
PG Q15/5 Research Skills	226	7	2.00	.061	2.00	.914	1	5
PG Q15/6 My English Language Skills are Good	225	8	2.18	.070	2.00	1.054	1	5
PG Q16/1 Advice and Support for Students	233	0	2.79	.085	3.00	1.292	1	5
PG Q16/2 Communication with University Staff	233	0	3.03	.092	3.00	1.406	1	5
PG Q16/3 Study Program is Well Organised	233	0	3.10	.092	3.00	1.404	1	5
PG Q17/1 Clear Standards and Criteria	233	0	3.03	.088	3.00	1.347	1	5
PG Q17/2 Fair Assessment	233	0	3.05	.085	3.00	1.299	1	5
PG Q17/3 Timely Feedback	233	0	2.95	.089	3.00	1.356	1	5
PG Q17/4 Opportunity to Express Views	233	0	2.96	.092	3.00	1.406	1	5
PG Q17/5 Feedback is Heard and Valued	233	0	3.05	.092	3.00	1.412	1	5
PG Q18/1 Library Resources and Facilities meet my Needs	205	28	3.02	.098	3.00	1.405	1	5
PG Q18/2 Having Access to General IT Facilities	188	45	3.05	.104	3.00	1.430	1	5
PG Q18/3 Having Access to Labs	182	51	3.37	.101	4.00	1.359	1	5

PG Q18/4 Learning Resources are Available	204	29	3.19	.096	3.00	1.377	1	5
PG Q18/5 Using the Online Library	192	41	2.91	.109	3.00	1.510	1	5
PG Q19/1 Social Services	180	53	3.20	.097	3.00	1.305	1	5
PG Q19/2 University Services	181	52	3.07	.094	3.00	1.259	1	5
PG Q19/3 Sports Activities	180	53	3.00	.090	3.00	1.205	1	5
PG Q19/4 Cultural Activities	190	43	2.98	.086	3.00	1.186	1	5
PG Q19/5 Social Activities	187	46	3.03	.084	3.00	1.147	1	5
PG Q19/6 Art Activities	190	43	3.07	.086	3.00	1.187	1	5
PG Q19/7 Students Union	185	48	3.02	.087	3.00	1.186	1	5
PG Q19/8 Youth welfare	182	51	2.93	.086	3.00	1.154	1	5
PG Q20/1 Familiarity with Job Market	233	0	2.40	.083	2.00	1.263	1	5
PG Q20/2 Higher education degrees guarantee job opportunities	233	0	2.85	.097	2.00	1.477	1	5
PG Q20/3 Language Improve Opportunity	233	0	1.74	.069	1.00	1.052	1	5
PG Q20/4 University offers guidance to job market	233	0	3.44	.087	4.00	1.322	1	5
PG Q20/5 Work Opportunity Abroad	233	0	2.24	.095	2.00	1.446	1	5
PG Q20/6 Work Opportunity in Private Sector	233	0	2.64	.091	2.00	1.392	1	5

PG Q20/7 Work Opportunity in Public Sector	233	0	2.40	.091	2.00	1.393	1	5
PG Q20/8 Starting my Own Business	233	0	2.11	.086	2.00	1.320	1	5
PG Q20/9 Working in My Field	233	0	1.37	.053	1.00	.816	1	5
PG Q21/1 Higher education needs reform	233	0	1.16	.035	1.00	.533	1	5
PG Q21/2 Students can compete in job market	233	0	3.15	.098	3.00	1.489	1	5
PG Q21/3 Career Plans	233	0	2.11	.076	2.00	1.153	1	5
PG Q21/4 Private universities offer good education	233	0	2.87	.086	3.00	1.320	1	5
PG Q21/5 Public universities offer good education	233	0	3.42	.085	4.00	1.298	1	5
PG Q21/6 Job prospects for private university graduates	233	0	2.56	.078	2.00	1.188	1	5
PG Q21/7 Job prospects for Public university graduates	233	0	3.24	.083	3.00	1.271	1	5
PG Q21/8 Job prospects for Technical HE graduates	233	0	2.84	.079	3.00	1.203	1	5
PG Q21/9 Students are Treated with Respect	233	0	2.96	.085	3.00	1.302	1	5
PG Q21/10 Academics are Treated with Respect	233	0	2.05	.070	2.00	1.065	1	5
PG Q21/11 HE Serves aVital Role	233	0	2.48	.097	2.00	1.480	1	5

PG Q22/1 Academic Post	160	73	1.00	.000	1.00	.000	1	1
PG Q22/2 Social Image	100	133	2.00	.000	2.00	.000	2	2
PG Q22/3 Social Networking	32	201	3.00	.000	3.00	.000	3	3
PG Q22/4 Gaining Knowledge	171	62	4.00	.000	4.00	.000	4	4
PG Q22/5 Job Prospects	144	89	5.00	.000	5.00	.000	5	5
PG Q22/6 Marriage Prospects	8	225	6.00	.000	6.00	.000	6	6
PG Q22/7 Family Pressure	9	224	7.00	.000	7.00	.000	7	7
PG Q22/8 Couldn't Find Job	37	196	8.00	.000	8.00	.000	8	8
PG Q22/9 Enrolling Other	38	195	9.00	.000	9.00	.000	9	9
PG Q23/1 Academic Staff	151	82	1.00	.000	1.00	.000	1	1
PG Q23/2 Admin Staff	42	191	2.00	.000	2.00	.000	2	2
PG Q23/3 Learning Resources	94	139	3.00	.000	3.00	.000	3	3
PG Q23/4 Facilities	107	126	4.00	.000	4.00	.000	4	4
PG Q23/5 Curricula	142	91	5.00	.000	5.00	.000	5	5
PG Q23/6 Teaching Methods	147	86	6.00	.000	6.00	.000	6	6
PG Q23/7 Union and Welfare	5	228	7.00	.000	7.00	.000	7	7
PG Q23/8 Priorities Other	11	222	8.00	.000	8.00	.000	8	8
PG Q24 Increasing Fees	233	0	1.26	.029	1.00	.438	1	2
PG Q27/1 Satisfaction with the Quality of Education	233	0	3.49	.080	4.00	1.222	1	5
PG Q27/2 Satisfaction with the Quality of Services	233	0	3.56	.077	4.00	1.173	1	5

Frequency Table

PG Q2 University Type

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	225	96.6	96.6	96.6
	2	8	3.4	3.4	100.0
	Total	233	100.0	100.0	

PG Q5 Degree

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	66	28.3	28.3	28.3
	2	114	48.9	48.9	77.3
	3	53	22.7	22.7	100.0
	Total	233	100.0	100.0	

PG Q7 Gender

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	131	56.2	56.2	56.2
	2	102	43.8	43.8	100.0
	Total	233	100.0	100.0	

PG Q9 Non-Home Student

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	49	21.0	21.4	21.4
	2	180	77.3	78.6	100.0
	Total	229	98.3	100.0	
Missing	System	4	1.7		
Total		233	100.0		

PG Q10/1 Modules are Relevant

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	48	20.6	22.4	22.4
	2	97	41.6	45.3	67.8
	3	22	9.4	10.3	78.0

	4	33	14.2	15.4	93.5
	5	14	6.0	6.5	100.0
	Total	214	91.8	100.0	
Missing	System	19	8.2		
Total		233	100.0		

PG Q10/2 Choosing Modules

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	52	22.3	32.7	32.7
	2	55	23.6	34.6	67.3
	3	9	3.9	5.7	73.0
	4	21	9.0	13.2	86.2
	5	22	9.4	13.8	100.0
	Total	159	68.2	100.0	
Missing	System	74	31.8		
Total		233	100.0		

PG Q10/3 Modules are Intellectually Stimulating

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	35	15.0	17.6	17.6
	2	58	24.9	29.1	46.7
	3	37	15.9	18.6	65.3
	4	47	20.2	23.6	88.9
	5	22	9.4	11.1	100.0
	Total	199	85.4	100.0	
Missing	System	34	14.6		
Total		233	100.0		

PG Q10/4 Modules are Taught in English

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	60	25.8	35.1	35.1
	2	47	20.2	27.5	62.6
	3	16	6.9	9.4	71.9
	4	26	11.2	15.2	87.1
	5	22	9.4	12.9	100.0
	Total	171	73.4	100.0	
Missing	System	62	26.6		

Total		233	100.0		

PG Q10/5 English is Adequately Taught

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	23	9.9	13.8	13.8
	2	33	14.2	19.8	33.5
	3	30	12.9	18.0	51.5
	4	47	20.2	28.1	79.6
	5	34	14.6	20.4	100.0
	Total	167	71.7	100.0	
Missing	System	66	28.3		
Total		233	100.0		

PG Q11 Private Tuition

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	17	7.3	7.3	7.3
	2	216	92.7	92.7	100.0
	Total	233	100.0	100.0	

PG Q12 Number Private Tuition Modules

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	2	.9	11.8	11.8
	2	5	2.1	29.4	41.2
	3	5	2.1	29.4	70.6
	4	1	.4	5.9	76.5
	5	4	1.7	23.5	100.0
	Total	17	7.3	100.0	
Missing	System	216	92.7		
Total		233	100.0		

PG Q13/1 Do not Understand

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	12	5.2	100.0	100.0
Missing	System	221	94.8		
Total		233	100.0		

PG Q13/2 Difficult Modules

		Frequency	Percent	Valid Percent	Cumulative %
Valid	2	6	2.6	100.0	100.0
Missing	System	227	97.4		
Total		233	100.0		

PG Q13/3 Crowded Rooms

		Frequency	Percent	Valid Percent	Cumulative %
Valid	3	8	3.4	100.0	100.0
Missing	System	225	96.6		
Total		233	100.0		

PG Q13/4 Other Reasons

		Frequency	Percent	Valid Percent	Cumulative %
Valid	4	6	2.6	100.0	100.0
Missing	System	227	97.4		
Total		233	100.0		

PG Q15/1 Good Supervision

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	71	30.5	34.1	34.1
	2	69	29.6	33.2	67.3
	3	32	13.7	15.4	82.7
	4	21	9.0	10.1	92.8
	5	15	6.4	7.2	100.0
	Total	208	89.3	100.0	
Missing	System	25	10.7		
Total		233	100.0		

PG Q15/2 Relevant Advice

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	75	32.2	35.4	35.4
	2	71	30.5	33.5	68.9

	3	35	15.0	16.5	85.4
	4	22	9.4	10.4	95.8
	5	9	3.9	4.2	100.0
	Total	212	91.0	100.0	
Missing	System	21	9.0		
Total		233	100.0		

PG Q15/3 Supervisor Helps Me

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	56	24.0	27.3	27.3
	2	77	33.0	37.6	64.9
	3	33	14.2	16.1	81.0
	4	28	12.0	13.7	94.6
	5	11	4.7	5.4	100.0
	Total	205	88.0	100.0	
Missing	System	28	12.0		
Total		233	100.0		

PG Q15/4 Supervisor Allocates Time

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	41	17.6	19.8	19.8
	2	63	27.0	30.4	50.2
	3	40	17.2	19.3	69.6
	4	41	17.6	19.8	89.4
	5	22	9.4	10.6	100.0
	Total	207	88.8	100.0	
Missing	System	26	11.2		
Total		233	100.0		

PG Q15/5 Research Skills

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	66	28.3	29.2	29.2
	2	118	50.6	52.2	81.4
	3	22	9.4	9.7	91.2
	4	16	6.9	7.1	98.2
	5	4	1.7	1.8	100.0
	Total	226	97.0	100.0	

Missing	System	7	3.0		
Total		233	100.0		

PG Q15/6 My English Language Skills are Good

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	59	25.3	26.2	26.2
	2	107	45.9	47.6	73.8
	3	28	12.0	12.4	86.2
	4	22	9.4	9.8	96.0
	5	9	3.9	4.0	100.0
	Total	225	96.6	100.0	
Missing	System	8	3.4		
Total		233	100.0		

PG Q16/1 Advice and Support for Students

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	45	19.3	19.3	19.3
	2	67	28.8	28.8	48.1
	3	36	15.5	15.5	63.5
	4	63	27.0	27.0	90.6
	5	22	9.4	9.4	100.0
	Total	233	100.0	100.0	

PG Q16/2 Communication with University Staff

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	40	17.2	17.2	17.2
	2	61	26.2	26.2	43.3
	3	29	12.4	12.4	55.8
	4	58	24.9	24.9	80.7
	5	45	19.3	19.3	100.0
	Total	233	100.0	100.0	

PG Q16/3 Study Program is Well Organised

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	35	15.0	15.0	15.0

	2	60	25.8	25.8	40.8
	3	37	15.9	15.9	56.7
	4	48	20.6	20.6	77.3
	5	53	22.7	22.7	100.0
	Total	233	100.0	100.0	

PG Q17/1 Clear Standards and Criteria

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	36	15.5	15.5	15.5
	2	59	25.3	25.3	40.8
	3	40	17.2	17.2	57.9
	4	58	24.9	24.9	82.8
	5	40	17.2	17.2	100.0
	Total	233	100.0	100.0	

PG Q17/2 Fair Assessment

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	27	11.6	11.6	11.6
	2	67	28.8	28.8	40.3
	3	48	20.6	20.6	60.9
	4	49	21.0	21.0	82.0
	5	42	18.0	18.0	100.0
	Total	233	100.0	100.0	

PG Q17/3 Timely Feedback

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	34	14.6	14.6	14.6
	2	74	31.8	31.8	46.4
	3	37	15.9	15.9	62.2
	4	45	19.3	19.3	81.5
	5	43	18.5	18.5	100.0
	Total	233	100.0	100.0	

PG Q17/4 Opportunity to Express Views

	Frequency	Percent	Valid Percent	Cumulative %

Valid	1	39	16.7	16.7	16.7
	2	69	29.6	29.6	46.4
	3	35	15.0	15.0	61.4
	4	42	18.0	18.0	79.4
	5	48	20.6	20.6	100.0
	Total	233	100.0	100.0	

PG Q17/5 Feedback is Heard and Valued

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	38	16.3	16.3	16.3
	2	61	26.2	26.2	42.5
	3	37	15.9	15.9	58.4
	4	46	19.7	19.7	78.1
	5	51	21.9	21.9	100.0
	Total	233	100.0	100.0	

PG Q18/1 Library Resources and Facilities meet my Needs

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	29	12.4	14.1	14.1
	2	67	28.8	32.7	46.8
	3	24	10.3	11.7	58.5
	4	40	17.2	19.5	78.0
	5	45	19.3	22.0	100.0
	Total	205	88.0	100.0	
Missing	System	28	12.0		
Total		233	100.0		

PG Q18/2 Having Access to General IT Facilities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	29	12.4	15.4	15.4
	2	55	23.6	29.3	44.7
	3	27	11.6	14.4	59.0
	4	32	13.7	17.0	76.1
	5	45	19.3	23.9	100.0
	Total	188	80.7	100.0	
Missing	System	45	19.3		
Total		233	100.0		

PG Q18/3 Having Access to Labs

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	19	8.2	10.4	10.4
	2	38	16.3	20.9	31.3
	3	33	14.2	18.1	49.5
	4	41	17.6	22.5	72.0
	5	51	21.9	28.0	100.0
	Total	182	78.1	100.0	
Missing	System	51	21.9		
Total		233	100.0		

PG Q18/4 Learning Resources are Available

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	26	11.2	12.7	12.7
	2	50	21.5	24.5	37.3
	3	37	15.9	18.1	55.4
	4	42	18.0	20.6	76.0
	5	49	21.0	24.0	100.0
	Total	204	87.6	100.0	
Missing	System	29	12.4		
Total		233	100.0		

PG Q18/5 Using the Online Library

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	42	18.0	21.9	21.9
	2	53	22.7	27.6	49.5
	3	25	10.7	13.0	62.5
	4	24	10.3	12.5	75.0
	5	48	20.6	25.0	100.0
	Total	192	82.4	100.0	
Missing	System	41	17.6		
Total		233	100.0		

PG Q19/1 Social Services

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	19	8.2	10.6	10.6
	2	37	15.9	20.6	31.1
	3	57	24.5	31.7	62.8
	4	23	9.9	12.8	75.6
	5	44	18.9	24.4	100.0
	Total	180	77.3	100.0	
Missing	System	53	22.7		
Total		233	100.0		

PG Q19/2 University Services

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	20	8.6	11.0	11.0
	2	43	18.5	23.8	34.8
	3	57	24.5	31.5	66.3
	4	27	11.6	14.9	81.2
	5	34	14.6	18.8	100.0
	Total	181	77.7	100.0	
Missing	System	52	22.3		
Total		233	100.0		

PG Q19/3 Sports Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	20	8.6	11.1	11.1
	2	42	18.0	23.3	34.4
	3	64	27.5	35.6	70.0
	4	26	11.2	14.4	84.4
	5	28	12.0	15.6	100.0
	Total	180	77.3	100.0	
Missing	System	53	22.7		
Total		233	100.0		

PG Q19/4 Cultural Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	18	7.7	9.5	9.5
	2	53	22.7	27.9	37.4
	3	62	26.6	32.6	70.0

	4	29	12.4	15.3	85.3
	5	28	12.0	14.7	100.0
	Total	190	81.5	100.0	
Missing	System	43	18.5		
Total		233	100.0		

PG Q19/5 Social Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	17	7.3	9.1	9.1
	2	45	19.3	24.1	33.2
	3	65	27.9	34.8	67.9
	4	36	15.5	19.3	87.2
	5	24	10.3	12.8	100.0
	Total	187	80.3	100.0	
Missing	System	46	19.7		
Total		233	100.0		

PG Q19/6 Art Activities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	18	7.7	9.5	9.5
	2	44	18.9	23.2	32.6
	3	64	27.5	33.7	66.3
	4	35	15.0	18.4	84.7
	5	29	12.4	15.3	100.0
	Total	190	81.5	100.0	
Missing	System	43	18.5		
Total		233	100.0		

PG Q19/7 Students Union

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	20	8.6	10.8	10.8
	2	40	17.2	21.6	32.4
	3	70	30.0	37.8	70.3
	4	27	11.6	14.6	84.9
	5	28	12.0	15.1	100.0
	Total	185	79.4	100.0	
Missing	System	48	20.6		

Total		233	100.0		

PG Q19/8 Youth welfare

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	19	8.2	10.4	10.4
	2	46	19.7	25.3	35.7
	3	69	29.6	37.9	73.6
	4	24	10.3	13.2	86.8
	5	24	10.3	13.2	100.0
	Total	182	78.1	100.0	
Missing	System	51	21.9		
Total		233	100.0		

PG Q20/1 Familiarity with Job Market

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	59	25.3	25.3	25.3
	2	96	41.2	41.2	66.5
	3	28	12.0	12.0	78.5
	4	26	11.2	11.2	89.7
	5	24	10.3	10.3	100.0
	Total	233	100.0	100.0	

PG Q20/2 Higher education degrees guarantee job opportunities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	54	23.2	23.2	23.2
	2	65	27.9	27.9	51.1
	3	24	10.3	10.3	61.4
	4	43	18.5	18.5	79.8
	5	47	20.2	20.2	100.0
	Total	233	100.0	100.0	

PG Q20/3 Language Improve Opportunity

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	122	52.4	52.4	52.4

	2	80	34.3	34.3	86.7
	3	13	5.6	5.6	92.3
	4	5	2.1	2.1	94.4
	5	13	5.6	5.6	100.0
	Total	233	100.0	100.0	

PG Q20/4 University offers guidance to job market

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	24	10.3	10.3	10.3
	2	36	15.5	15.5	25.8
	3	53	22.7	22.7	48.5
	4	54	23.2	23.2	71.7
	5	66	28.3	28.3	100.0
	Total	233	100.0	100.0	

PG Q20/5 Work Opportunity Abroad

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	101	43.3	43.3	43.3
	2	60	25.8	25.8	69.1
	3	20	8.6	8.6	77.7
	4	18	7.7	7.7	85.4
	5	34	14.6	14.6	100.0
	Total	233	100.0	100.0	

PG Q20/6 Work Opportunity in Private Sector

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	59	25.3	25.3	25.3
	2	66	28.3	28.3	53.6
	3	45	19.3	19.3	73.0
	4	25	10.7	10.7	83.7
	5	38	16.3	16.3	100.0
	Total	233	100.0	100.0	

PG Q20/7 Work Opportunity in Public Sector

		Frequency	Percent	Valid Percent	Cumulative %

Valid	1	78	33.5	33.5	33.5
	2	69	29.6	29.6	63.1
	3	35	15.0	15.0	78.1
	4	17	7.3	7.3	85.4
	5	34	14.6	14.6	100.0
	Total	233	100.0	100.0	

PG Q20/8 Starting my Own Business

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	108	46.4	46.4	46.4
	2	53	22.7	22.7	69.1
	3	33	14.2	14.2	83.3
	4	17	7.3	7.3	90.6
	5	22	9.4	9.4	100.0
	Total	233	100.0	100.0	

PG Q20/9 Working in My Field

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	178	76.4	76.4	76.4
	2	36	15.5	15.5	91.8
	3	11	4.7	4.7	96.6
	4	3	1.3	1.3	97.9
	5	5	2.1	2.1	100.0
	Total	233	100.0	100.0	

PG Q21/1 Higher education needs reform

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	205	88.0	88.0	88.0
	2	23	9.9	9.9	97.9
	3	2	.9	.9	98.7
	4	1	.4	.4	99.1
	5	2	.9	.9	100.0
	Total	233	100.0	100.0	

PG Q21/2 Students can compete in job market

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	40	17.2	17.2	17.2
	2	55	23.6	23.6	40.8
	3	34	14.6	14.6	55.4
	4	37	15.9	15.9	71.2
	5	67	28.8	28.8	100.0
	Total	233	100.0	100.0	

PG Q21/3 Career Plans

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	83	35.6	35.6	35.6
	2	87	37.3	37.3	73.0
	3	33	14.2	14.2	87.1
	4	15	6.4	6.4	93.6
	5	15	6.4	6.4	100.0
	Total	233	100.0	100.0	

PG Q21/4 Private universities offer good education

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	47	20.2	20.2	20.2
	2	45	19.3	19.3	39.5
	3	65	27.9	27.9	67.4
	4	43	18.5	18.5	85.8
	5	33	14.2	14.2	100.0
	Total	233	100.0	100.0	

PG Q21/5 Public universities offer good education

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	25	10.7	10.7	10.7
	2	36	15.5	15.5	26.2
	3	43	18.5	18.5	44.6
	4	73	31.3	31.3	76.0
	5	56	24.0	24.0	100.0
	Total	233	100.0	100.0	

PG Q21/6 Job prospects for private university graduates

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	48	20.6	20.6	20.6
	2	72	30.9	30.9	51.5
	3	68	29.2	29.2	80.7
	4	24	10.3	10.3	91.0
	5	21	9.0	9.0	100.0
	Total	233	100.0	100.0	

PG Q21/7 Job prospects for Public university graduates

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	22	9.4	9.4	9.4
	2	47	20.2	20.2	29.6
	3	70	30.0	30.0	59.7
	4	41	17.6	17.6	77.3
	5	53	22.7	22.7	100.0
	Total	233	100.0	100.0	

PG Q21/8 Job prospects for Technical HE graduates

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	29	12.4	12.4	12.4
	2	69	29.6	29.6	42.1
	3	80	34.3	34.3	76.4
	4	21	9.0	9.0	85.4
	5	34	14.6	14.6	100.0
	Total	233	100.0	100.0	

PG Q21/9 Students are Treated with Respect

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	30	12.9	12.9	12.9
	2	77	33.0	33.0	45.9
	3	34	14.6	14.6	60.5
	4	57	24.5	24.5	85.0
	5	35	15.0	15.0	100.0
	Total	233	100.0	100.0	

PG Q21/10 Academics are Treated with Respect

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	78	33.5	33.5	33.5
	2	103	44.2	44.2	77.7
	3	24	10.3	10.3	88.0
	4	18	7.7	7.7	95.7
	5	10	4.3	4.3	100.0
	Total	233	100.0	100.0	

PG Q21/11 HE Serves aVital Role

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	86	36.9	36.9	36.9
	2	51	21.9	21.9	58.8
	3	31	13.3	13.3	72.1
	4	28	12.0	12.0	84.1
	5	37	15.9	15.9	100.0
	Total	233	100.0	100.0	

PG Q22/1 Academic Post

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	160	68.7	100.0	100.0
Missing	System	73	31.3		
Total		233	100.0		

PG Q22/2 Social Image

		Frequency	Percent	Valid Percent	Cumulative %
Valid	2	100	42.9	100.0	100.0
Missing	System	133	57.1		
Total		233	100.0		

PG Q22/3 Social Networking

		Frequency	Percent	Valid Percent	Cumulative %
Valid	3	32	13.7	100.0	100.0
Missing	System	201	86.3		

Total		233	100.0		

PG Q22/4 Gaining Knowledge

		Frequency	Percent	Valid Percent	Cumulative %
Valid	4	171	73.4	100.0	100.0
Missing	System	62	26.6		
Total		233	100.0		

PG Q22/5 Job Prospects

		Frequency	Percent	Valid Percent	Cumulative %
Valid	5	144	61.8	100.0	100.0
Missing	System	89	38.2		
Total		233	100.0		

PG Q22/6 Marriage Prospects

		Frequency	Percent	Valid Percent	Cumulative %
Valid	6	8	3.4	100.0	100.0
Missing	System	225	96.6		
Total		233	100.0		

PG Q22/7 Family Pressure

		Frequency	Percent	Valid Percent	Cumulative %
Valid	7	9	3.9	100.0	100.0
Missing	System	224	96.1		
Total		233	100.0		

PG Q22/8 Couldn't Find Job

		Frequency	Percent	Valid Percent	Cumulative %
Valid	8	37	15.9	100.0	100.0
Missing	System	196	84.1		
Total		233	100.0		

PG Q22/9 Enrolling Other

		Frequency	Percent	Valid Percent	Cumulative %
Valid	9	38	16.3	100.0	100.0
Missing	System	195	83.7		
Total		233	100.0		

PG Q23/1 Academic Staff

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	151	64.8	100.0	100.0
Missing	System	82	35.2		
Total		233	100.0		

PG Q23/2 Admin Staff

		Frequency	Percent	Valid Percent	Cumulative %
Valid	2	42	18.0	100.0	100.0
Missing	System	191	82.0		
Total		233	100.0		

PG Q23/3 Learning Resources

		Frequency	Percent	Valid Percent	Cumulative %
Valid	3	94	40.3	100.0	100.0
Missing	System	139	59.7		
Total		233	100.0		

PG Q23/4 Facilities

		Frequency	Percent	Valid Percent	Cumulative %
Valid	4	107	45.9	100.0	100.0
Missing	System	126	54.1		
Total		233	100.0		

PG Q23/5 Curricula

		Frequency	Percent	Valid Percent	Cumulative %
Valid	5	142	60.9	100.0	100.0
Missing	System	91	39.1		
Total		233	100.0		

PG Q23/6 Teaching Methods

		Frequency	Percent	Valid Percent	Cumulative %
Valid	6	147	63.1	100.0	100.0
Missing	System	86	36.9		
Total		233	100.0		

PG Q23/7 Union and Welfare

		Frequency	Percent	Valid Percent	Cumulative %
Valid	7	5	2.1	100.0	100.0
Missing	System	228	97.9		
Total		233	100.0		

PG Q23/8 Priorities Other

		Frequency	Percent	Valid Percent	Cumulative %
Valid	8	11	4.7	100.0	100.0
Missing	System	222	95.3		
Total		233	100.0		

PG Q24 Increasing Fees

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	173	74.2	74.2	74.2
	2	60	25.8	25.8	100.0
	Total	233	100.0	100.0	

PG Q27/1 Satisfaction with the Quality of Education

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	14	6.0	6.0	6.0
	2	47	20.2	20.2	26.2
	3	37	15.9	15.9	42.1
	4	80	34.3	34.3	76.4
	5	55	23.6	23.6	100.0
	Total	233	100.0	100.0	

PG Q27/2 Satisfaction with the Quality of Services

		Frequency	Percent	Valid Percent	Cumulative %
Valid	1	11	4.7	4.7	4.7
	2	41	17.6	17.6	22.3
	3	44	18.9	18.9	41.2
	4	80	34.3	34.3	75.5
	5	57	24.5	24.5	100.0
	Total	233	100.0	100.0	

SET TLook=None Small=0.0001 SUMMARY=None THREADS=AUTO TFit=Both DIGITGROUPING=No LEADZERO=No TABLERENDER=light.

9.6.1 ***PG Degree Crosstabs***

Higher Diploma: 1

Masters: 2

Ph.D: 3

PG Q5 Degree * PG Q10/1 Modules are Relevant Cross-tabulation

			PG Q10/1 Modules are Relevant					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	17	27	8	6	3	61
		% within PG Q5 Degree	27.9%	44.3%	13.1%	9.8%	4.9%	100.0%
	2	Count	14	46	12	21	8	101
		% within PG Q5 Degree	13.9%	45.5%	11.9%	20.8%	7.9%	100.0%
	3	Count	17	24	2	6	3	52
		% within PG Q5 Degree	32.7%	46.2%	3.8%	11.5%	5.8%	100.0%
Total		Count	48	97	22	33	14	214
		% within PG Q5 Degree	22.4%	45.3%	10.3%	15.4%	6.5%	100.0%

PG Q5 Degree * PG Q10/2 Choosing Modules Cross-tabulation

			PG Q10/2 Choosing Modules					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	12	17	4	7	6	46
		% within PG Q5 Degree	26.1%	37.0%	8.7%	15.2%	13.0%	100.0%
	2	Count	23	26	3	9	11	72
		% within PG Q5 Degree	31.9%	36.1%	4.2%	12.5%	15.3%	100.0%
	3	Count	17	12	2	5	5	41
		% within PG Q5 Degree	41.5%	29.3%	4.9%	12.2%	12.2%	100.0%
Total		Count	52	55	9	21	22	159
		% within PG Q5 Degree	32.7%	34.6%	5.7%	13.2%	13.8%	100.0%

PG Q5 Degree * PG Q10/3 Modules are Intellectually Stimulating Cross-tabulation

			PG Q10/3 Modules are Intellectually Stimulating					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	9	17	9	15	6	56
		% within PG Q5 Degree	16.1%	30.4%	16.1%	26.8%	10.7%	100.0%
	2	Count	13	29	20	25	10	97
		% within PG Q5 Degree	13.4%	29.9%	20.6%	25.8%	10.3%	100.0%
	3	Count	13	12	8	7	6	46
		% within PG Q5 Degree	28.3%	26.1%	17.4%	15.2%	13.0%	100.0%
Total		Count	35	58	37	47	22	199
		% within PG Q5 Degree	17.6%	29.1%	18.6%	23.6%	11.1%	100.0%

PG Q5 Degree * PG Q10/4 Modules are Taught in English Cross-tabulation

			PG Q10/4 Modules are Taught in English					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	10	11	5	7	7	40
		% within PG Q5 Degree	25.0%	27.5%	12.5%	17.5%	17.5%	100.0%
	2	Count	35	24	8	12	10	89
		% within PG Q5 Degree	39.3%	27.0%	9.0%	13.5%	11.2%	100.0%
	3	Count	15	12	3	7	5	42
		% within PG Q5 Degree	35.7%	28.6%	7.1%	16.7%	11.9%	100.0%
Total		Count	60	47	16	26	22	171
		% within PG Q5 Degree	35.1%	27.5%	9.4%	15.2%	12.9%	100.0%

PG Q5 Degree * PG Q10/5 English is Adequately Taught Cross-tabulation

			PG Q10/5 English is Adequately Taught					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	7	7	5	13	5	37
		% within PG Q5 Degree	18.9%	18.9%	13.5%	35.1%	13.5%	100.0%

	2	Count	6	20	22	21	19	88
		% within PG Q5 Degree	6.8%	22.7%	25.0%	23.9%	21.6%	100.0%
	3	Count	10	6	3	13	10	42
		% within PG Q5 Degree	23.8%	14.3%	7.1%	31.0%	23.8%	100.0%
Total		Count	23	33	30	47	34	167
		% within PG Q5 Degree	13.8%	19.8%	18.0%	28.1%	20.4%	100.0%

PG Q5 Degree * PG Q11 Private Tuition Cross-tabulation

			PG Q11 Private Tuition		
			1	2	Total
PG Q5 Degree	1	Count	9	57	66
		% within PG Q5 Degree	13.6%	86.4%	100.0%
	2	Count	4	110	114
		% within PG Q5 Degree	3.5%	96.5%	100.0%
	3	Count	4	49	53
		% within PG Q5 Degree	7.5%	92.5%	100.0%
Total		Count	17	216	233
		% within PG Q5 Degree	7.3%	92.7%	100.0%

PG Q5 Degree * PG Q15/1 Good Supervision Cross-tabulation

			PG Q15/1 Good Supervision					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	15	21	10	7	3	56
		% within PG Q5 Degree	26.8%	37.5%	17.9%	12.5%	5.4%	100.0%
	2	Count	36	31	15	10	9	101
		% within PG Q5 Degree	35.6%	30.7%	14.9%	9.9%	8.9%	100.0%
	3	Count	20	17	7	4	3	51
		% within PG Q5 Degree	39.2%	33.3%	13.7%	7.8%	5.9%	100.0%
Total		Count	71	69	32	21	15	208
		% within PG Q5 Degree	34.1%	33.2%	15.4%	10.1%	7.2%	100.0%

PG Q5 Degree * PG Q15/2 Relevant Advice Cross-tabulation

			PG Q15/2 Relevant Advice					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	15	19	12	9	2	57
		% within PG Q5 Degree	26.3%	33.3%	21.1%	15.8%	3.5%	100.0%
	2	Count	39	36	15	10	5	105
		% within PG Q5 Degree	37.1%	34.3%	14.3%	9.5%	4.8%	100.0%
	3	Count	21	16	8	3	2	50
		% within PG Q5 Degree	42.0%	32.0%	16.0%	6.0%	4.0%	100.0%
Total		Count	75	71	35	22	9	212
		% within PG Q5 Degree	35.4%	33.5%	16.5%	10.4%	4.2%	100.0%

PG Q5 Degree * PG Q15/3 Supervisor Helps Me Cross-tabulation

			PG Q15/3 Supervisor Helps Me					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	12	18	12	10	2	54
		% within PG Q5 Degree	22.2%	33.3%	22.2%	18.5%	3.7%	100.0%
	2	Count	28	40	15	12	5	100
		% within PG Q5 Degree	28.0%	40.0%	15.0%	12.0%	5.0%	100.0%
	3	Count	16	19	6	6	4	51
		% within PG Q5 Degree	31.4%	37.3%	11.8%	11.8%	7.8%	100.0%
Total		Count	56	77	33	28	11	205
		% within PG Q5 Degree	27.3%	37.6%	16.1%	13.7%	5.4%	100.0%

PG Q5 Degree * PG Q15/4 Supervisor Allocates Time Cross-tabulation

			PG Q15/4 Supervisor Allocates Time					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	8	13	18	12	5	56
		% within PG Q5 Degree	14.3%	23.2%	32.1%	21.4%	8.9%	100.0%

	2	Count	22	33	14	21	10	100
		% within PG Q5 Degree	22.0%	33.0%	14.0%	21.0%	10.0%	100.0%
	3	Count	11	17	8	8	7	51
		% within PG Q5 Degree	21.6%	33.3%	15.7%	15.7%	13.7%	100.0%
Total		Count	41	63	40	41	22	207
		% within PG Q5 Degree	19.8%	30.4%	19.3%	19.8%	10.6%	100.0%

PG Q5 Degree * PG Q15/5 Research Skills Cross-tabulation

			PG Q15/5 Research Skills					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	16	32	8	6	0	62
		% within PG Q5 Degree	25.8%	51.6%	12.9%	9.7%	0.0%	100.0%
	2	Count	32	57	11	8	4	112
		% within PG Q5 Degree	28.6%	50.9%	9.8%	7.1%	3.6%	100.0%
	3	Count	18	29	3	2	0	52
		% within PG Q5 Degree	34.6%	55.8%	5.8%	3.8%	0.0%	100.0%
Total		Count	66	118	22	16	4	226
		% within PG Q5 Degree	29.2%	52.2%	9.7%	7.1%	1.8%	100.0%

PG Q5 Degree * PG Q15/6 My English Language Skills are Good Cross-tabulation

			PG Q15/6 My English Language Skills are Good					
			1	2	3	4	5	Total
PG Q5 Degree	1	Count	14	27	11	6	4	62
		% within PG Q5 Degree	22.6%	43.5%	17.7%	9.7%	6.5%	100.0%
	2	Count	27	58	11	10	5	111
		% within PG Q5 Degree	24.3%	52.3%	9.9%	9.0%	4.5%	100.0%
	3	Count	18	22	6	6	0	52
		% within PG Q5 Degree	34.6%	42.3%	11.5%	11.5%	0.0%	100.0%

Total		Count	59	107	28	22	9	225
		% within PG Q5 Degree	26.2%	47.6%	12.4%	9.8%	4.0%	100.0%

PG Q5 Degree * PG Q23/1 Academic Staff Cross-tabulation

			PG Q23/1 Academic Staff 1	Total
PG Q5 Degree	1	Count	36	36
		% within PG Q5 Degree	100.0%	100.0%
	2	Count	79	79
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	36	36
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	151	151
		% within PG Q5 Degree	100.0%	100.0%

PG Q5 Degree * PG Q23/2 Admin Staff Cross-tabulation

			PG Q23/2 Admin Staff 2	Total
PG Q5 Degree	1	Count	11	11
		% within PG Q5 Degree	100.0%	100.0%
	2	Count	18	18
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	13	13
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	42	42
		% within PG Q5 Degree	100.0%	100.0%

PG Q5 Degree * PG Q23/3 Learning Resources Cross-tabulation

			PG Q23/3 Learning Resources 3	Total
PG Q5 Degree	1	Count	30	30

		% within PG Q5 Degree	100.0%	100.0%
	2	Count	38	38
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	26	26
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	94	94
		% within PG Q5 Degree	100.0%	100.0%

PG Q5 Degree * PG Q23/4 Facilities Cross-tabulation

			PG Q23/4 Facilities 4	Total
PG Q5 Degree	1	Count	27	27
		% within PG Q5 Degree	100.0%	100.0%
	2	Count	53	53
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	27	27
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	107	107
		% within PG Q5 Degree	100.0%	100.0%

PG Q5 Degree * PG Q23/5 Curricula Cross-tabulation

			PG Q23/5 Curricula 5	Total
PG Q5 Degree	1	Count	44	44
		% within PG Q5 Degree	100.0%	100.0%
	2	Count	72	72
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	26	26
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	142	142
		% within PG Q5 Degree	100.0%	100.0%

PG Q5 Degree * PG Q23/6 Teaching Methods Cross-tabulation

			PG Q23/6 Teaching Methods 6	Total
PG Q5 Degree	1	Count	45	45
		% within PG Q5 Degree	100.0%	100.0%
	2	Count	74	74
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	28	28
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	147	147
		% within PG Q5 Degree	100.0%	100.0%

PG Q5 Degree * PG Q23/7 Union and Welfare Cross-tabulation

			PG Q23/7 Union and Welfare 7	Total
PG Q5 Degree	1	Count	1	1
		% within PG Q5 Degree	100.0%	100.0%
	2	Count	3	3
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	1	1
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	5	5
		% within PG Q5 Degree	100.0%	100.0%

PG Q5 Degree * PG Q23/8 Priorities Other Cross-tabulation

			PG Q23/8 Priorities Other 8	Total
PG Q5 Degree	1	Count	4	4
		% within PG Q5 Degree	100.0%	100.0%
	2	Count	5	5
		% within PG Q5 Degree	100.0%	100.0%
	3	Count	2	2
		% within PG Q5 Degree	100.0%	100.0%
Total		Count	11	11

% within PG Q5 Degree	100.0%	100.0%

9.6.2 *PG Private Tuition Crosstabs*

PG Q11 Private Tuition * PG Q27/1 Satisfaction with the Quality of Education Cross-tabulation

			PG Q27/1 Satisfaction with the Quality of Education					
			1	2	3	4	5	Total
PG Q11 Private Tuition	1	Count	0	2	3	7	5	17
		% within PG Q11 Private Tuition	0.0%	11.8%	17.6%	41.2%	29.4%	100.0%
	2	Count	14	45	34	73	50	216
		% within PG Q11 Private Tuition	6.5%	20.8%	15.7%	33.8%	23.1%	100.0%
Total		Count	14	47	37	80	55	233
		% within PG Q11 Private Tuition	6.0%	20.2%	15.9%	34.3%	23.6%	100.0%

PG Q11 Private Tuition * PG Q27/2 Satisfaction with the Quality of Services Cross-tabulation

			PG Q27/2 Satisfaction with the Quality of Services					
			1	2	3	4	5	Total
PG Q11 Private Tuition	1	Count	0	2	3	6	6	17
		% within PG Q11 Private Tuition	0.0%	11.8%	17.6%	35.3%	35.3%	100.0%
	2	Count	11	39	41	74	51	216
		% within PG Q11 Private Tuition	5.1%	18.1%	19.0%	34.3%	23.6%	100.0%
Total		Count	11	41	44	80	57	233
		% within PG Q11 Private Tuition	4.7%	17.6%	18.9%	34.3%	24.5%	100.0%

9.6.3 ***PG Gender Crosstabs***

Male: 1

Female: 2

PG Q7 Gender * PG Q10/1 Modules are Relevant Cross-tabulation

			PG Q10/1 Modules are Relevant					
			1	2	3	4	5	Total
PG Q7 Gender	1	Count	31	57	9	17	9	123
		% within PG Q7 Gender	25.2%	46.3%	7.3%	13.8%	7.3%	100.0%
	2	Count	17	40	13	16	5	91
		% within PG Q7 Gender	18.7%	44.0%	14.3%	17.6%	5.5%	100.0%
Total		Count	48	97	22	33	14	214
		% within PG Q7 Gender	22.4%	45.3%	10.3%	15.4%	6.5%	100.0%

PG Q7 Gender * PG Q10/2 Choosing Modules Cross-tabulation

			PG Q10/2 Choosing Modules					
			1	2	3	4	5	Total
PG Q7 Gender	1	Count	30	34	3	13	14	94
		% within PG Q7 Gender	31.9%	36.2%	3.2%	13.8%	14.9%	100.0%
	2	Count	22	21	6	8	8	65
		% within PG Q7 Gender	33.8%	32.3%	9.2%	12.3%	12.3%	100.0%
Total		Count	52	55	9	21	22	159
		% within PG Q7 Gender	32.7%	34.6%	5.7%	13.2%	13.8%	100.0%

PG Q7 Gender * PG Q10/3 Modules are Intellectually Stimulating Cross-tabulation

			PG Q10/3 Modules are Intellectually Stimulating					
			1	2	3	4	5	Total
PG Q7 Gender	1	Count	20	35	22	19	14	110
		% within PG Q7 Gender	18.2%	31.8%	20.0%	17.3%	12.7%	100.0%
	2	Count	15	23	15	28	8	89

		% within PG Q7 Gender	16.9%	25.8%	16.9%	31.5%	9.0%	100.0%
Total		Count	35	58	37	47	22	199
		% within PG Q7 Gender	17.6%	29.1%	18.6%	23.6%	11.1%	100.0%

PG Q7 Gender * PG Q10/4 Modules are Taught in English Cross-tabulation

			PG Q10/4 Modules are Taught in English					
			1	2	3	4	5	Total
PG Q7 Gender	1	Count	34	27	11	13	11	96
		% within PG Q7 Gender	35.4%	28.1%	11.5%	13.5%	11.5%	100.0%
	2	Count	26	20	5	13	11	75
		% within PG Q7 Gender	34.7%	26.7%	6.7%	17.3%	14.7%	100.0%
Total		Count	60	47	16	26	22	171
		% within PG Q7 Gender	35.1%	27.5%	9.4%	15.2%	12.9%	100.0%

PG Q7 Gender * PG Q10/5 English is Adequately Taught Cross-tabulation

			PG Q10/5 English is Adequately Taught					
			1	2	3	4	5	Total
PG Q7 Gender	1	Count	13	18	17	24	16	88
		% within PG Q7 Gender	14.8%	20.5%	19.3%	27.3%	18.2%	100.0%
	2	Count	10	15	13	23	18	79
		% within PG Q7 Gender	12.7%	19.0%	16.5%	29.1%	22.8%	100.0%
Total		Count	23	33	30	47	34	167
		% within PG Q7 Gender	13.8%	19.8%	18.0%	28.1%	20.4%	100.0%

9.6.4 ***PG University Type Crosstabs***

PG Q2 University Type * PG Q10/1 Modules are Relevant Cross-tabulation

			PG Q10/1 Modules are Relevant					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	46	95	21	31	14	207
		% within PG Q2 University Type	22.2%	45.9%	10.1%	15.0%	6.8%	100%
	2	Count	2	2	1	2	0	7
		% within PG Q2 University Type	28.6%	28.6%	14.3%	28.6%	0.0%	100%
Total		Count	48	97	22	33	14	214
		% within PG Q2 University Type	22.4%	45.3%	10.3%	15.4%	6.5%	100%

PG Q2 University Type * PG Q10/2 Choosing Modules Cross-tabulation

			PG Q10/2 Choosing Modules					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	51	52	9	21	21	154
		% within PG Q2 University Type	33.1%	33.8%	5.8%	13.6%	13.6%	100%
	2	Count	1	3	0	0	1	5
		% within PG Q2 University Type	20.0%	60.0%	0.0%	0.0%	20.0%	100%
Total		Count	52	55	9	21	22	159
		% within PG Q2 University Type	32.7%	34.6%	5.7%	13.2%	13.8%	100%

PG Q2 University Type * PG Q10/3 Modules are Intellectually Stimulating Cross-tabulation

			PG Q10/3 Modules are Intellectually Stimulating					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	32	57	36	46	21	192
		% within PG Q2 University Type	16.7%	29.7%	18.8%	24.0%	10.9%	100%
	2	Count	3	1	1	1	1	7

		% within PG Q2 University Type	42.9%	14.3%	14.3%	14.3%	14.3%	100%
Total		Count	35	58	37	47	22	199
		% within PG Q2 University Type	17.6%	29.1%	18.6%	23.6%	11.1%	100%

PG Q2 University Type * PG Q10/4 Modules are Taught in English Cross-tabulation

			PG Q10/4 Modules are Taught in English					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	56	44	16	26	22	164
		% within PG Q2 University Type	34.1%	26.8%	9.8%	15.9%	13.4%	100%
	2	Count	4	3	0	0	0	7
		% within PG Q2 University Type	57.1%	42.9%	0.0%	0.0%	0.0%	100%
Total		Count	60	47	16	26	22	171
		% within PG Q2 University Type	35.1%	27.5%	9.4%	15.2%	12.9%	100%

PG Q2 University Type * PG Q10/5 English is Adequately Taught Cross-tabulation

			PG Q10/5 English is Adequately Taught					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	19	32	29	47	33	160
		% within PG Q2 University Type	11.9%	20.0%	18.1%	29.4%	20.6%	100%
	2	Count	4	1	1	0	1	7
		% within PG Q2 University Type	57.1%	14.3%	14.3%	0.0%	14.3%	100%
Total		Count	23	33	30	47	34	167
		% within PG Q2 University Type	13.8%	19.8%	18.0%	28.1%	20.4%	100%

PG Q2 University Type * PG Q11 Private Tuition Cross-tabulation

			PG Q11 Private Tuition		
			1	2	Total
PG Q2 University Type	1	Count	16	209	225

		% within PG Q2 University Type	7.1%	92.9%	100%
	2	Count	1	7	8
		% within PG Q2 University Type	12.5%	87.5%	100%
Total		Count	17	216	233
		% within PG Q2 University Type	7.3%	92.7%	100%

PG Q2 University Type * PG Q16/1 Advice and Support for Students Cross-tabulation

			PG Q16/1 Advice and Support for Students					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	42	64	35	62	22	225
		% within PG Q2 University Type	18.7%	28.4%	15.6%	27.6%	9.8%	100%
	2	Count	3	3	1	1	0	8
		% within PG Q2 University Type	37.5%	37.5%	12.5%	12.5%	0.0%	100%
Total		Count	45	67	36	63	22	233
		% within PG Q2 University Type	19.3%	28.8%	15.5%	27.0%	9.4%	100%

PG Q2 University Type * PG Q16/2 Communication with University Staff Cross-tabulation

			PG Q16/2 Communication with University Staff					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	36	58	29	58	44	225
		% within PG Q2 University Type	16.0%	25.8%	12.9%	25.8%	19.6%	100%
	2	Count	4	3	0	0	1	8
		% within PG Q2 University Type	50.0%	37.5%	0.0%	0.0%	12.5%	100%
Total		Count	40	61	29	58	45	233
		% within PG Q2 University Type	17.2%	26.2%	12.4%	24.9%	19.3%	100%

PG Q2 University Type * PG Q16/3 Study Program is Well Organised Cross-tabulation

			PG Q16/3 Study Program is Well Organised					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	31	58	36	47	53	225
		% within PG Q2 University Type	13.8%	25.8%	16.0%	20.9%	23.6%	100%
	2	Count	4	2	1	1	0	8
		% within PG Q2 University Type	50.0%	25.0%	12.5%	12.5%	0.0%	100%
Total		Count	35	60	37	48	53	233
		% within PG Q2 University Type	15.0%	25.8%	15.9%	20.6%	22.7%	100%

PG Q2 University Type * PG Q17/1 Clear Standards and Criteria Cross-tabulation

			PG Q17/1 Clear Standards and Criteria					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	35	56	39	57	38	225
		% within PG Q2 University Type	15.6%	24.9%	17.3%	25.3%	16.9%	100%
	2	Count	1	3	1	1	2	8
		% within PG Q2 University Type	12.5%	37.5%	12.5%	12.5%	25.0%	100%
Total		Count	36	59	40	58	40	233
		% within PG Q2 University Type	15.5%	25.3%	17.2%	24.9%	17.2%	100%

PG Q2 University Type * PG Q17/2 Fair Assessment Cross-tabulation

			PG Q17/2 Fair Assessment					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	24	67	47	46	41	225
		% within PG Q2 University Type	10.7%	29.8%	20.9%	20.4%	18.2%	100%
	2	Count	3	0	1	3	1	8
		% within PG Q2 University Type	37.5%	0.0%	12.5%	37.5%	12.5%	100%
Total		Count	27	67	48	49	42	233
		% within PG Q2 University Type	11.6%	28.8%	20.6%	21.0%	18.0%	100%

PG Q2 University Type * PG Q17/3 Timely Feedback Cross-tabulation

			PG Q17/3 Timely Feedback					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	31	72	36	45	41	225
		% within PG Q2 University Type	13.8%	32.0%	16.0%	20.0%	18.2%	100%
	2	Count	3	2	1	0	2	8
		% within PG Q2 University Type	37.5%	25.0%	12.5%	0.0%	25.0%	100%
Total		Count	34	74	37	45	43	233
		% within PG Q2 University Type	14.6%	31.8%	15.9%	19.3%	18.5%	100%

PG Q2 University Type * PG Q17/4 Opportunity to Express Views Cross-tabulation

			PG Q17/4 Opportunity to Express Views					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	36	66	34	42	47	225
		% within PG Q2 University Type	16.0%	29.3%	15.1%	18.7%	20.9%	100%
	2	Count	3	3	1	0	1	8
		% within PG Q2 University Type	37.5%	37.5%	12.5%	0.0%	12.5%	100%
Total		Count	39	69	35	42	48	233
		% within PG Q2 University Type	16.7%	29.6%	15.0%	18.0%	20.6%	100%

PG Q2 University Type * PG Q17/5 Feedback is Heard and Valued Cross-tabulation

			PG Q17/5 Feedback is Heard and Valued					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	34	58	37	46	50	225
		% within PG Q2 University Type	15.1%	25.8%	16.4%	20.4%	22.2%	100%
	2	Count	4	3	0	0	1	8
		% within PG Q2 University Type	50.0%	37.5%	0.0%	0.0%	12.5%	100%
Total		Count	38	61	37	46	51	233

		% within PG Q2 University Type	16.3%	26.2%	15.9%	19.7%	21.9%	100%

PG Q2 University Type * PG Q18/1 Library Resources and Facilities meet my Needs Cross-tabulation

			PG Q18/1 Library Resources and Facilities meet my Needs					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	27	64	22	40	44	197
		% within PG Q2 University Type	13.7%	32.5%	11.2%	20.3%	22.3%	100%
	2	Count	2	3	2	0	1	8
		% within PG Q2 University Type	25.0%	37.5%	25.0%	0.0%	12.5%	100%
Total		Count	29	67	24	40	45	205
		% within PG Q2 University Type	14.1%	32.7%	11.7%	19.5%	22.0%	100%

PG Q2 University Type * PG Q18/2 Having Access to General IT Facilities Cross-tabulation

			PG Q18/2 Having Access to General IT Facilities					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	26	52	26	32	44	180
		% within PG Q2 University Type	14.4%	28.9%	14.4%	17.8%	24.4%	100%
	2	Count	3	3	1	0	1	8
		% within PG Q2 University Type	37.5%	37.5%	12.5%	0.0%	12.5%	100%
Total		Count	29	55	27	32	45	188
		% within PG Q2 University Type	15.4%	29.3%	14.4%	17.0%	23.9%	100%

PG Q2 University Type * PG Q18/3 Having Access to Labs Cross-tabulation

			PG Q18/3 Having Access to Labs					
			1	2	3	4	5	Total
PG Q2 University	1	Count	16	35	32	41	50	174

Type		% within PG Q2 University Type	9.2%	20.1%	18.4%	23.6%	28.7%	100%
	2	Count	3	3	1	0	1	8
		% within PG Q2 University Type	37.5%	37.5%	12.5%	0.0%	12.5%	100%
Total		Count	19	38	33	41	51	182
		% within PG Q2 University Type	10.4%	20.9%	18.1%	22.5%	28.0%	100%

PG Q2 University Type * PG Q18/4 Learning Resources are Available Cross-tabulation

			PG Q18/4 Learning Resources are Available					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	24	46	36	42	48	196
		% within PG Q2 University Type	12.2%	23.5%	18.4%	21.4%	24.5%	100%
	2	Count	2	4	1	0	1	8
		% within PG Q2 University Type	25.0%	50.0%	12.5%	0.0%	12.5%	100%
Total		Count	26	50	37	42	49	204
		% within PG Q2 University Type	12.7%	24.5%	18.1%	20.6%	24.0%	100%

PG Q2 University Type * PG Q18/5 Using the Online Library Cross-tabulation

			PG Q18/5 Using the Online Library					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	40	51	23	24	46	184
		% within PG Q2 University Type	21.7%	27.7%	12.5%	13.0%	25.0%	100%
	2	Count	2	2	2	0	2	8
		% within PG Q2 University Type	25.0%	25.0%	25.0%	0.0%	25.0%	100%
Total		Count	42	53	25	24	48	192
		% within PG Q2 University Type	21.9%	27.6%	13.0%	12.5%	25.0%	100%

PG Q2 University Type * PG Q19/1 Social Services Cross-tabulation

			PG Q19/1 Social Services					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	18	36	55	23	42	174
		% within PG Q2 University Type	10.3%	20.7%	31.6%	13.2%	24.1%	100%
	2	Count	1	1	2	0	2	6
		% within PG Q2 University Type	16.7%	16.7%	33.3%	0.0%	33.3%	100%
Total		Count	19	37	57	23	44	180
		% within PG Q2 University Type	10.6%	20.6%	31.7%	12.8%	24.4%	100%

PG Q2 University Type * PG Q19/2 University Services Cross-tabulation

			PG Q19/2 University Services					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	19	41	55	27	33	175
		% within PG Q2 University Type	10.9%	23.4%	31.4%	15.4%	18.9%	100%
	2	Count	1	2	2	0	1	6
		% within PG Q2 University Type	16.7%	33.3%	33.3%	0.0%	16.7%	100%
Total		Count	20	43	57	27	34	181
		% within PG Q2 University Type	11.0%	23.8%	31.5%	14.9%	18.8%	100%

PG Q2 University Type * PG Q19/3 Sports Activities Cross-tabulation

			PG Q19/3 Sports Activities					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	18	41	61	26	27	173
		% within PG Q2 University Type	10.4%	23.7%	35.3%	15.0%	15.6%	100%
	2	Count	2	1	3	0	1	7
		% within PG Q2 University Type	28.6%	14.3%	42.9%	0.0%	14.3%	100%
Total		Count	20	42	64	26	28	180
		% within PG Q2 University Type	11.1%	23.3%	35.6%	14.4%	15.6%	100%

PG Q2 University Type * PG Q19/4 Cultural Activities Cross-tabulation

			PG Q19/4 Cultural Activities					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	16	51	61	28	27	183
		% within PG Q2 University Type	8.7%	27.9%	33.3%	15.3%	14.8%	100%
	2	Count	2	2	1	1	1	7
		% within PG Q2 University Type	28.6%	28.6%	14.3%	14.3%	14.3%	100%
Total		Count	18	53	62	29	28	190
		% within PG Q2 University Type	9.5%	27.9%	32.6%	15.3%	14.7%	100%

PG Q2 University Type * PG Q19/5 Social Activities Cross-tabulation

			PG Q19/5 Social Activities					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	15	44	63	35	23	180
		% within PG Q2 University Type	8.3%	24.4%	35.0%	19.4%	12.8%	100%
	2	Count	2	1	2	1	1	7
		% within PG Q2 University Type	28.6%	14.3%	28.6%	14.3%	14.3%	100%
Total		Count	17	45	65	36	24	187
		% within PG Q2 University Type	9.1%	24.1%	34.8%	19.3%	12.8%	100%

PG Q2 University Type * PG Q19/6 Art Activities Cross-tabulation

			PG Q19/6 Art Activities					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	16	43	62	34	28	183
		% within PG Q2 University Type	8.7%	23.5%	33.9%	18.6%	15.3%	100%
	2	Count	2	1	2	1	1	7
		% within PG Q2 University Type	28.6%	14.3%	28.6%	14.3%	14.3%	100%
Total		Count	18	44	64	35	29	190
		% within PG Q2 University Type	9.5%	23.2%	33.7%	18.4%	15.3%	100%

PG Q2 University Type * PG Q19/7 Students Union Cross-tabulation

			PG Q19/7 Students Union					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	18	38	69	26	27	178
		% within PG Q2 University Type	10.1%	21.3%	38.8%	14.6%	15.2%	100%
	2	Count	2	2	1	1	1	7
		% within PG Q2 University Type	28.6%	28.6%	14.3%	14.3%	14.3%	100%
Total		Count	20	40	70	27	28	185
		% within PG Q2 University Type	10.8%	21.6%	37.8%	14.6%	15.1%	100%

PG Q2 University Type * PG Q19/8 Youth welfare Cross-tabulation

			PG Q19/8 Youth welfare					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	17	44	68	23	23	175
		% within PG Q2 University Type	9.7%	25.1%	38.9%	13.1%	13.1%	100%
	2	Count	2	2	1	1	1	7
		% within PG Q2 University Type	28.6%	28.6%	14.3%	14.3%	14.3%	100%
Total		Count	19	46	69	24	24	182
		% within PG Q2 University Type	10.4%	25.3%	37.9%	13.2%	13.2%	100%

PG Q2 University Type * PG Q20/1 Familiarity with Job Market Cross-tabulation

			PG Q20/1 Familiarity with Job Market					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	58	94	26	25	22	225
		% within PG Q2 University Type	25.8%	41.8%	11.6%	11.1%	9.8%	100%
	2	Count	1	2	2	1	2	8
		% within PG Q2 University Type	12.5%	25.0%	25.0%	12.5%	25.0%	100%
Total		Count	59	96	28	26	24	233

		% within PG Q2 University Type	25.3%	41.2%	12.0%	11.2%	10.3%	100%

PG Q2 University Type * PG Q20/2 Higher education degrees guarantee job opportunities Cross-tabulation

			PG Q20/2 Higher education degrees guarantee job opportunities					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	50	64	22	43	46	225
		% within PG Q2 University Type	22.2%	28.4%	9.8%	19.1%	20.4%	100%
	2	Count	4	1	2	0	1	8
		% within PG Q2 University Type	50.0%	12.5%	25.0%	0.0%	12.5%	100%
Total		Count	54	65	24	43	47	233
		% within PG Q2 University Type	23.2%	27.9%	10.3%	18.5%	20.2%	100%

PG Q2 University Type * PG Q20/3 Language Improve Opportunity Cross-tabulation

			PG Q20/3 Language Improve Opportunity					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	118	79	11	5	12	225
		% within PG Q2 University Type	52.4%	35.1%	4.9%	2.2%	5.3%	100%
	2	Count	4	1	2	0	1	8
		% within PG Q2 University Type	50.0%	12.5%	25.0%	0.0%	12.5%	100%
Total		Count	122	80	13	5	13	233
		% within PG Q2 University Type	52.4%	34.3%	5.6%	2.1%	5.6%	100%

PG Q2 University Type * PG Q20/4 University offers guidance to job market Cross-tabulation

			PG Q20/4 University offers guidance to job market					
			1	2	3	4	5	Total
PG Q2 University	1	Count	21	35	50	54	65	225

Type		% within PG Q2 University Type	9.3%	15.6%	22.2%	24.0%	28.9%	100%
	2	Count	3	1	3	0	1	8
		% within PG Q2 University Type	37.5%	12.5%	37.5%	0.0%	12.5%	100%
Total		Count	24	36	53	54	66	233
		% within PG Q2 University Type	10.3%	15.5%	22.7%	23.2%	28.3%	100%

PG Q2 University Type * PG Q20/5 Work Opportunity Abroad Cross-tabulation

			PG Q20/5 Work Opportunity Abroad					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	98	59	18	17	33	225
		% within PG Q2 University Type	43.6%	26.2%	8.0%	7.6%	14.7%	100%
	2	Count	3	1	2	1	1	8
		% within PG Q2 University Type	37.5%	12.5%	25.0%	12.5%	12.5%	100%
Total		Count	101	60	20	18	34	233
		% within PG Q2 University Type	43.3%	25.8%	8.6%	7.7%	14.6%	100%

PG Q2 University Type * PG Q20/6 Work Opportunity in Private Sector Cross-tabulation

			PG Q20/6 Work Opportunity in Private Sector					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	57	65	42	25	36	225
		% within PG Q2 University Type	25.3%	28.9%	18.7%	11.1%	16.0%	100%
	2	Count	2	1	3	0	2	8
		% within PG Q2 University Type	25.0%	12.5%	37.5%	0.0%	25.0%	100%
Total		Count	59	66	45	25	38	233
		% within PG Q2 University Type	25.3%	28.3%	19.3%	10.7%	16.3%	100%

PG Q2 University Type * PG Q20/7 Work Opportunity in Public Sector Cross-tabulation

			PG Q20/7 Work Opportunity in Public Sector					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	76	67	32	17	33	225
		% within PG Q2 University Type	33.8%	29.8%	14.2%	7.6%	14.7%	100%
	2	Count	2	2	3	0	1	8
		% within PG Q2 University Type	25.0%	25.0%	37.5%	0.0%	12.5%	100%
Total		Count	78	69	35	17	34	233
		% within PG Q2 University Type	33.5%	29.6%	15.0%	7.3%	14.6%	100%

PG Q2 University Type * PG Q20/8 Starting my Own Business Cross-tabulation

			PG Q20/8 Starting my Own Business					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	104	52	32	17	20	225
		% within PG Q2 University Type	46.2%	23.1%	14.2%	7.6%	8.9%	100%
	2	Count	4	1	1	0	2	8
		% within PG Q2 University Type	50.0%	12.5%	12.5%	0.0%	25.0%	100%
Total		Count	108	53	33	17	22	233
		% within PG Q2 University Type	46.4%	22.7%	14.2%	7.3%	9.4%	100%

PG Q2 University Type * PG Q20/9 Working in My Field Cross-tabulation

			PG Q20/9 Working in My Field					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	175	34	9	3	4	225
		% within PG Q2 University Type	77.8%	15.1%	4.0%	1.3%	1.8%	100%
	2	Count	3	2	2	0	1	8
		% within PG Q2 University Type	37.5%	25.0%	25.0%	0.0%	12.5%	100%
Total		Count	178	36	11	3	5	233

		% within PG Q2 University Type	76.4%	15.5%	4.7%	1.3%	2.1%	100%

PG Q2 University Type * PG Q21/1 Higher education needs reform Cross-tabulation

			PG Q21/1 Higher education needs reform					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	201	20	1	1	2	225
		% within PG Q2 University Type	89.3%	8.9%	0.4%	0.4%	0.9%	100%
	2	Count	4	3	1	0	0	8
		% within PG Q2 University Type	50.0%	37.5%	12.5%	0.0%	0.0%	100%
Total		Count	205	23	2	1	2	233
		% within PG Q2 University Type	88.0%	9.9%	0.9%	0.4%	0.9%	100%

PG Q2 University Type * PG Q21/2 Students can compete in job market Cross-tabulation

			PG Q21/2 Students can compete in job market					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	37	54	33	35	66	225
		% within PG Q2 University Type	16.4%	24.0%	14.7%	15.6%	29.3%	100%
	2	Count	3	1	1	2	1	8
		% within PG Q2 University Type	37.5%	12.5%	12.5%	25.0%	12.5%	100%
Total		Count	40	55	34	37	67	233
		% within PG Q2 University Type	17.2%	23.6%	14.6%	15.9%	28.8%	100%

PG Q2 University Type * PG Q21/3 Career Plans Cross-tabulation

			PG Q21/3 Career Plans					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	80	85	32	13	15	225
		% within PG Q2 University Type	35.6%	37.8%	14.2%	5.8%	6.7%	100%

	2	Count	3	2	1	2	0	8
		% within PG Q2 University Type	37.5%	25.0%	12.5%	25.0%	0.0%	100%
Total		Count	83	87	33	15	15	233
		% within PG Q2 University Type	35.6%	37.3%	14.2%	6.4%	6.4%	100%

PG Q2 University Type * PG Q21/4 Private universities offer good education Cross-tabulation

			PG Q21/4 Private universities offer good education					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	43	44	63	42	33	225
		% within PG Q2 University Type	19.1%	19.6%	28.0%	18.7%	14.7%	100%
	2	Count	4	1	2	1	0	8
		% within PG Q2 University Type	50.0%	12.5%	25.0%	12.5%	0.0%	100%
Total		Count	47	45	65	43	33	233
		% within PG Q2 University Type	20.2%	19.3%	27.9%	18.5%	14.2%	100%

PG Q2 University Type * PG Q21/5 Public universities offer good education Cross-tabulation

			PG Q21/5 Public universities offer good education					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	24	35	39	71	56	225
		% within PG Q2 University Type	10.7%	15.6%	17.3%	31.6%	24.9%	100%
	2	Count	1	1	4	2	0	8
		% within PG Q2 University Type	12.5%	12.5%	50.0%	25.0%	0.0%	100%
Total		Count	25	36	43	73	56	233
		% within PG Q2 University Type	10.7%	15.5%	18.5%	31.3%	24.0%	100%

PG Q2 University Type * PG Q21/6 Job prospects for private university graduates Cross-tabulation

			PG Q21/6 Job prospects for private university graduates					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	48	69	64	24	20	225
		% within PG Q2 University Type	21.3%	30.7%	28.4%	10.7%	8.9%	100%
	2	Count	0	3	4	0	1	8
		% within PG Q2 University Type	0.0%	37.5%	50.0%	0.0%	12.5%	100%
Total		Count	48	72	68	24	21	233
		% within PG Q2 University Type	20.6%	30.9%	29.2%	10.3%	9.0%	100%

PG Q2 University Type * PG Q21/7 Job prospects for Public university graduates Cross-tabulation

			PG Q21/7 Job prospects for Public university graduates					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	21	44	67	41	52	225
		% within PG Q2 University Type	9.3%	19.6%	29.8%	18.2%	23.1%	100%
	2	Count	1	3	3	0	1	8
		% within PG Q2 University Type	12.5%	37.5%	37.5%	0.0%	12.5%	100%
Total		Count	22	47	70	41	53	233
		% within PG Q2 University Type	9.4%	20.2%	30.0%	17.6%	22.7%	100%

PG Q2 University Type * PG Q21/8 Job prospects for Technical HE graduates Cross-tabulation

			PG Q21/8 Job prospects for Technical HE graduates					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	28	64	79	21	33	225
		% within PG Q2 University Type	12.4%	28.4%	35.1%	9.3%	14.7%	100%
	2	Count	1	5	1	0	1	8

		% within PG Q2 University Type	12.5%	62.5%	12.5%	0.0%	12.5%	100%
Total		Count	29	69	80	21	34	233
		% within PG Q2 University Type	12.4%	29.6%	34.3%	9.0%	14.6%	100%

PG Q2 University Type * PG Q21/9 Students are Treated with Respect Cross-tabulation

			PG Q21/9 Students are Treated with Respect					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	27	75	33	57	33	225
		% within PG Q2 University Type	12.0%	33.3%	14.7%	25.3%	14.7%	100%
	2	Count	3	2	1	0	2	8
		% within PG Q2 University Type	37.5%	25.0%	12.5%	0.0%	25.0%	100%
Total		Count	30	77	34	57	35	233
		% within PG Q2 University Type	12.9%	33.0%	14.6%	24.5%	15.0%	100%

PG Q2 University Type * PG Q21/10 Academics are Treated with Respect Cross-tabulation

			PG Q21/10 Academics are Treated with Respect					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	75	102	22	17	9	225
		% within PG Q2 University Type	33.3%	45.3%	9.8%	7.6%	4.0%	100%
	2	Count	3	1	2	1	1	8
		% within PG Q2 University Type	37.5%	12.5%	25.0%	12.5%	12.5%	100%
Total		Count	78	103	24	18	10	233
		% within PG Q2 University Type	33.5%	44.2%	10.3%	7.7%	4.3%	100%

PG Q2 University Type * PG Q21/11 HE Serves aVital Role Cross-tabulation

			PG Q21/11 HE Serves aVital Role	Total

			1	2	3	4	5	
PG Q2 University Type	1	Count	85	47	30	27	36	225
		% within PG Q2 University Type	37.8%	20.9%	13.3%	12.0%	16.0%	100%
	2	Count	1	4	1	1	1	8
		% within PG Q2 University Type	12.5%	50.0%	12.5%	12.5%	12.5%	100%
Total		Count	86	51	31	28	37	233
		% within PG Q2 University Type	36.9%	21.9%	13.3%	12.0%	15.9%	100%

PG Q2 University Type * PG Q22/1 Academic Post Cross-tabulation

			PG Q22/1 Academic Post 1	Total
PG Q2 University Type	1	Count	154	154
		% within PG Q2 University Type	100%	100%
	2	Count	6	6
		% within PG Q2 University Type	100%	100%
Total		Count	160	160
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/2 Social Image Cross-tabulation

			PG Q22/2 Social Image 2	Total
PG Q2 University Type	1	Count	96	96
		% within PG Q2 University Type	100%	100%
	2	Count	4	4
		% within PG Q2 University Type	100%	100%
Total		Count	100	100
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/3 Social Networking Cross-tabulation

			PG Q22/3 Social Networking 3	Total
PG Q2 University Type	1	Count	31	31
		% within PG Q2 University Type	100%	100%
	2	Count	1	1
		% within PG Q2 University Type	100%	100%
Total		Count	32	32
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/4 Gaining Knowledge Cross-tabulation

			PG Q22/4 Gaining Knowledge 4	Total
PG Q2 University Type	1	Count	167	167
		% within PG Q2 University Type	100%	100%
	2	Count	4	4
		% within PG Q2 University Type	100%	100%
Total		Count	171	171
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/5 Job Prospects Cross-tabulation

			PG Q22/5 Job Prospects 5	Total
PG Q2 University Type	1	Count	138	138
		% within PG Q2 University Type	100%	100%
	2	Count	6	6

		% within PG Q2 University Type	100%	100%
Total		Count	144	144
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/6 Marriage Prospects Cross-tabulation

			PG Q22/6 Marriage Prospects 6	Total
PG Q2 University Type	1	Count	8	8
		% within PG Q2 University Type	100%	100%
Total		Count	8	8
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/7 Family Pressure Cross-tabulation

			PG Q22/7 Family Pressure 7	Total
PG Q2 University Type	1	Count	7	7
		% within PG Q2 University Type	100%	100%
	2	Count	2	2
		% within PG Q2 University Type	100%	100%
Total		Count	9	9
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/8 Couldn't Find Job Cross-tabulation

			PG Q22/8 Couldn't Find Job 8	Total

PG Q2 University Type	1	Count	36	36
		% within PG Q2 University Type	100%	100%
	2	Count	1	1
		% within PG Q2 University Type	100%	100%
Total		Count	37	37
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q22/9 Enrolling Other Cross-tabulation

			PG Q22/9 Enrolling Other 9	Total
PG Q2 University Type	1	Count	38	38
		% within PG Q2 University Type	100%	100%
Total		Count	38	38
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/1 Academic Staff Cross-tabulation

			PG Q23/1 Academic Staff 1	Total
PG Q2 University Type	1	Count	145	145
		% within PG Q2 University Type	100%	100%
	2	Count	6	6
		% within PG Q2 University Type	100%	100%
Total		Count	151	151
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/2 Admin Staff Cross-tabulation

			PG Q23/2 Admin Staff 2	Total
PG Q2 University Type	1	Count	40	40
		% within PG Q2 University Type	100%	100%
	2	Count	2	2
		% within PG Q2 University Type	100%	100%
Total		Count	42	42
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/3 Learning Resources Cross-tabulation

			PG Q23/3 Learning Resources 3	Total
PG Q2 University Type	1	Count	92	92
		% within PG Q2 University Type	100%	100%
	2	Count	2	2
		% within PG Q2 University Type	100%	100%
Total		Count	94	94
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/4 Facilities Cross-tabulation

			PG Q23/4 Facilities 4	Total
PG Q2 University Type	1	Count	103	103
		% within PG Q2 University Type	100%	100%
	2	Count	4	4
		% within PG Q2 University Type	100%	100%
Total		Count	107	107

		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/5 Curricula Cross-tabulation

			PG Q23/5 Curricula 5	Total
PG Q2 University Type	1	Count	137	137
		% within PG Q2 University Type	100%	100%
	2	Count	5	5
		% within PG Q2 University Type	100%	100%
Total		Count	142	142
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/6 Teaching Methods Cross-tabulation

			PG Q23/6 Teaching Methods 6	Total
PG Q2 University Type	1	Count	142	142
		% within PG Q2 University Type	100%	100%
	2	Count	5	5
		% within PG Q2 University Type	100%	100%
Total		Count	147	147
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/7 Union and Welfare Cross-tabulation

			PG Q23/7 Union and Welfare 7	Total
PG Q2 University Type	1	Count	5	5

	% within PG Q2 University Type	100%	100%
Total	Count	5	5
	% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q23/8 Priorities Other Cross-tabulation

			PG Q23/8 Priorities Other 8	Total
PG Q2 University Type	1	Count	11	11
		% within PG Q2 University Type	100%	100%
Total		Count	11	11
		% within PG Q2 University Type	100%	100%

PG Q2 University Type * PG Q24 Increasing Fees Cross-tabulation

			PG Q24 Increasing Fees		
			1	2	Total
PG Q2 University Type	1	Count	168	57	225
		% within PG Q2 University Type	74.7%	25.3%	100%
	2	Count	5	3	8
		% within PG Q2 University Type	62.5%	37.5%	100%
Total		Count	173	60	233
		% within PG Q2 University Type	74.2%	25.8%	100%

PG Q2 University Type * PG Q27/1 Satisfaction with the Quality of Education Cross-tabulation

			PG Q27/1 Satisfaction with the Quality of Education					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	13	42	37	78	55	225
		% within PG Q2 University Type	5.8%	18.7%	16.4%	34.7%	24.4%	100%

	2	Count	1	5	0	2	0	8
		% within PG Q2 University Type	12.5%	62.5%	0.0%	25.0%	0.0%	100%
Total		Count	14	47	37	80	55	233
		% within PG Q2 University Type	6.0%	20.2%	15.9%	34.3%	23.6%	100%

PG Q2 University Type * PG Q27/2 Satisfaction with the Quality of Services Cross-tabulation

			PG Q27/2 Satisfaction with the Quality of Services					
			1	2	3	4	5	Total
PG Q2 University Type	1	Count	9	38	43	79	56	225
		% within PG Q2 University Type	4.0%	16.9%	19.1%	35.1%	24.9%	100%
	2	Count	2	3	1	1	1	8
		% within PG Q2 University Type	25.0%	37.5%	12.5%	12.5%	12.5%	100%
Total		Count	11	41	44	80	57	233
		% within PG Q2 University Type	4.7%	17.6%	18.9%	34.3%	24.5%	100%

9.7 ACA Summary Data Report

Descriptive Statistics

	N							
	Valid	Missing	Mean	Std. Error of Mean	Median	Std. Deviation	Minimum	Maximum
ACA Q2 University Type	223	3	1.03	.012	1.00	.175	1	2
ACA Q5 Academic Rank	189	37	3.49	.065	4.00	.897	2	5
ACA Q7 Gender	223	3	1.33	.031	1.00	.470	1	2
ACA Q9 Teaching in Other University	219	7	1.11	.021	1.00	.307	1	2
ACA Q10/1 Time for Research	216	10	3.07	.082	3.00	1.210	1	5
ACA Q10/2 Funding for Research	201	25	4.04	.086	5.00	1.220	1	5
ACA Q10/3 Modules are Intellectually Stimulating	211	15	2.51	.077	2.00	1.119	1	5
ACA Q10/4 Modules are Relevant	213	13	2.10	.063	2.00	.926	1	5
ACA Q10/5 Teaching Methods	207	19	3.09	.082	3.00	1.175	1	5
ACA Q10/6 Choosing Modules	176	50	3.32	.098	3.50	1.305	1	5
ACA Q10/7 Study Program is Well Organised	216	10	2.94	.081	3.00	1.190	1	5
ACA Q10/8 Teaching Hours	205	21	2.60	.083	2.00	1.190	1	5
ACA Q10/9 Allocated Supervision	129	97	2.68	.113	2.00	1.287	1	5
ACA Q10/10 Trust Students Skills	199	27	2.93	.087	3.00	1.223	1	5
ACA Q11 Teaching Privately	223	3	.98	.009	1.00	.133	0	1

ACA Q12/1 Advice and Support for Students	218	8	1.75	.048	2.00	.714	1	5
ACA Q12/2 Communication with University Staff	215	11	2.02	.059	2.00	.872	1	5
ACA Q12/3 Supervisor Allocates Time	214	12	2.21	.062	2.00	.913	1	5
ACA Q12/4 Opportunity to Express Views	210	16	3.17	.081	3.00	1.174	1	5
ACA Q12/5 Feedback is Heard and Valued	215	11	1.81	.045	2.00	.667	1	5
ACA Q13/1 Clear Standards and Criteria	223	3	2.70	.077	2.00	1.157	1	5
ACA Q13/2 Fair Assessment	223	3	2.86	.074	3.00	1.108	1	5
ACA Q13/3 Measuring Level of Understanding	223	3	2.93	.078	3.00	1.160	1	5
ACA Q13/4 Timely Feedback	223	3	2.46	.070	2.00	1.051	1	5
ACA Q14/1 Library Resources and Facilities meet my Needs	211	15	3.40	.082	4.00	1.184	1	5
ACA Q14/2 Having Access to General IT Facilities	207	19	3.03	.087	3.00	1.254	1	5
ACA Q14/3 Having Access to Labs	201	25	3.54	.082	4.00	1.162	1	5
ACA Q14/4 Learning Resources are Available	205	21	3.30	.082	3.00	1.173	1	5
ACA Q14/5 Using the Online Library	208	18	2.65	.090	2.00	1.295	1	5

ACA Q15/1 Good Curricula for Job Market	223	3	3.29	.076	3.00	1.138	1	5
ACA Q15/2 University degrees guarantee job opportunities	223	3	3.13	.079	3.00	1.184	1	5
ACA Q15/3 University offers guidance to job market	223	3	3.43	.074	4.00	1.100	1	5
ACA Q16/1 Higher education needs reform	223	3	1.23	.036	1.00	.536	1	5
ACA Q16/2 Students can compete in job market	223	3	3.64	.068	4.00	1.008	1	5
ACA Q16/3 Private universities offer good education	223	3	3.50	.070	4.00	1.039	1	5
ACA Q16/4 Public universities offer good education	223	3	3.30	.061	3.00	.907	1	5
ACA Q16/5 Job prospects for private university graduates	223	3	3.08	.068	3.00	1.017	1	5
ACA Q16/6 Job prospects for Public university graduates	223	3	3.16	.062	3.00	.929	1	5
ACA Q16/7 Job prospects for Technical HE graduates	223	3	3.23	.069	3.00	1.034	1	5
ACA Q16/8 Students are Treated with Respect	223	3	2.36	.061	2.00	.909	1	5

ACA Q16/9 Academics are Treated with Respect	223	3	2.48	.064	2.00	.958	1	5
ACA Q16/10 HE Serves a Vital Role	223	3	3.38	.073	3.00	1.083	1	5
ACA Q16/11 Good Salaries	223	3	3.13	.081	3.00	1.213	1	5
ACA Q17/1 Societal Role	156	70	1.00	.000	1.00	.000	1	1
ACA Q17/2 Educational Role	167	59	2.00	.000	2.00	.000	2	2
ACA Q17/3 Research Role	188	38	3.00	.000	3.00	.000	3	3
ACA Q17/4 Jobs Role	120	106	4.00	.000	4.00	.000	4	4
ACA Q17/5 Democracy Role	21	205	5.00	.000	5.00	.000	5	5
ACA Q17/6 Other Role	12	214	6.00	.000	6.00	.000	6	6
ACA Q18/1 Academic Staff	200	26	1.00	.000	1.00	.000	1	1
ACA Q18/2 Admin Staff	32	194	2.00	.000	2.00	.000	2	2
ACA Q18/3 Learning Resources	71	155	3.00	.000	3.00	.000	3	3
ACA Q18/4 Facilities	120	106	4.00	.000	4.00	.000	4	4
ACA Q18/5 Curricula	134	92	5.00	.000	5.00	.000	5	5
ACA Q18/6 Curricula	103	123	6.00	.000	6.00	.000	6	6
ACA Q18/7 Union and Welfare	5	221	7.00	.000	7.00	.000	7	7
ACA Q18/8 Priorities Other	4	222	8.00	.000	8.00	.000	8	8
ACA Q20 Increasing Fees	223	3	1.44	.033	1.00	.497	1	2

ACA Q22/1 Satisfaction with the Quality of Education	223	3	3.62	.065	4.00	.964	1	5
ACA Q22/2 Quality Assurance Programme	223	3	3.59	.074	4.00	1.107	1	5
ACA Q22/3 Mutual Trust	223	3	2.57	.063	2.00	.936	1	5
ACA Q22/4 Government Priority	223	3	3.41	.079	4.00	1.182	1	5
ACA Q22/5 Political Well	223	3	3.31	.076	3.00	1.139	1	5
ACA Q22/6 After Revolution	223	3	2.74	.080	3.00	1.192	1	5
ACA Q22/7 Reform Tracks	223	3	2.53	.074	2.00	1.110	1	5
ACA Q22/8 Freedom and Democracy	223	3	1.96	.063	2.00	.944	1	5
ACA Q23 Positive Aspects	223	3	1.59	.033	2.00	.493	1	2

Frequency Table

ACA Q2 University Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	216	95.6	96.9	96.9
	2	7	3.1	3.1	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q5 Academic Rank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	15.0	15.2	15.2

	2	33	14.6	14.8	30.0
	3	49	21.7	22.0	52.0
	4	88	38.9	39.5	91.5
	5	19	8.4	8.5	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q7 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	150	66.4	67.3	67.3
	2	73	32.3	32.7	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q9 Teaching in Other University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	196	86.7	89.5	89.5
	2	23	10.2	10.5	100.0
	Total	219	96.9	100.0	
Missing	System	7	3.1		
Total		226	100.0		

ACA Q10/1 Time for Research

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	7.5	7.9	7.9
	2	76	33.6	35.2	43.1
	3	20	8.8	9.3	52.3
	4	80	35.4	37.0	89.4
	5	23	10.2	10.6	100.0
	Total	216	95.6	100.0	
Missing	System	10	4.4		
Total		226	100.0		

ACA Q10/2 Funding for Research

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	4.0	4.5	4.5
	2	24	10.6	11.9	16.4
	3	19	8.4	9.5	25.9
	4	47	20.8	23.4	49.3
	5	102	45.1	50.7	100.0
	Total	201	88.9	100.0	
Missing	System	25	11.1		
Total		226	100.0		

ACA Q10/3 Modules are Intellectually Stimulating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	30	13.3	14.2	14.2
	2	105	46.5	49.8	64.0
	3	29	12.8	13.7	77.7
	4	33	14.6	15.6	93.4
	5	14	6.2	6.6	100.0
	Total	211	93.4	100.0	
Missing	System	15	6.6		
Total		226	100.0		

ACA Q10/4 Modules are Relevant

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	51	22.6	23.9	23.9
	2	115	50.9	54.0	77.9
	3	25	11.1	11.7	89.7
	4	18	8.0	8.5	98.1
	5	4	1.8	1.9	100.0
	Total	213	94.2	100.0	
Missing	System	13	5.8		
Total		226	100.0		

ACA Q10/5 Teaching Methods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	4.9	5.3	5.3
	2	73	32.3	35.3	40.6

	3	38	16.8	18.4	58.9
	4	57	25.2	27.5	86.5
	5	28	12.4	13.5	100.0
	Total	207	91.6	100.0	
Missing	System	19	8.4		
Total		226	100.0		

ACA Q10/6 Choosing Modules

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	5.3	6.8	6.8
	2	51	22.6	29.0	35.8
	3	25	11.1	14.2	50.0
	4	45	19.9	25.6	75.6
	5	43	19.0	24.4	100.0
	Total	176	77.9	100.0	
Missing	System	50	22.1		
Total		226	100.0		

ACA Q10/7 Study Program is Well Organised

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	7.1	7.4	7.4
	2	80	35.4	37.0	44.4
	3	52	23.0	24.1	68.5
	4	37	16.4	17.1	85.6
	5	31	13.7	14.4	100.0
	Total	216	95.6	100.0	
Missing	System	10	4.4		
Total		226	100.0		

ACA Q10/8 Teaching Hours

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	27	11.9	13.2	13.2
	2	100	44.2	48.8	62.0
	3	25	11.1	12.2	74.1
	4	33	14.6	16.1	90.2
	5	20	8.8	9.8	100.0
	Total	205	90.7	100.0	

Missing	System	21	9.3		
Total		226	100.0		

ACA Q10/9 Allocated Supervision

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	24	10.6	18.6	18.6
	2	46	20.4	35.7	54.3
	3	21	9.3	16.3	70.5
	4	23	10.2	17.8	88.4
	5	15	6.6	11.6	100.0
	Total	129	57.1	100.0	
Missing	System	97	42.9		
Total		226	100.0		

ACA Q10/10 Trust Students Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	8.8	10.1	10.1
	2	69	30.5	34.7	44.7
	3	40	17.7	20.1	64.8
	4	44	19.5	22.1	86.9
	5	26	11.5	13.1	100.0
	Total	199	88.1	100.0	
Missing	System	27	11.9		
Total		226	100.0		

ACA Q11 Teaching Privately

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.8	1.8	1.8
	1	219	96.9	98.2	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q12/1 Advice and Support for Students

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1	81	35.8	37.2	37.2
	2	117	51.8	53.7	90.8
	3	14	6.2	6.4	97.2
	4	5	2.2	2.3	99.5
	5	1	.4	.5	100.0
	Total	218	96.5	100.0	
Missing	System	8	3.5		
Total		226	100.0		

ACA Q12/2 Communication with University Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	56	24.8	26.0	26.0
	2	118	52.2	54.9	80.9
	3	24	10.6	11.2	92.1
	4	14	6.2	6.5	98.6
	5	3	1.3	1.4	100.0
	Total	215	95.1	100.0	
Missing	System	11	4.9		
Total		226	100.0		

ACA Q12/3 Supervisor Allocates Time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	39	17.3	18.2	18.2
	2	120	53.1	56.1	74.3
	3	29	12.8	13.6	87.9
	4	23	10.2	10.7	98.6
	5	3	1.3	1.4	100.0
	Total	214	94.7	100.0	
Missing	System	12	5.3		
Total		226	100.0		

ACA Q12/4 Opportunity to Express Views

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	14	6.2	6.7	6.7
	2	57	25.2	27.1	33.8
	3	48	21.2	22.9	56.7
	4	61	27.0	29.0	85.7

	5	30	13.3	14.3	100.0
	Total	210	92.9	100.0	
Missing	System	16	7.1		
Total		226	100.0		

ACA Q12/5 Feedback is Heard and Valued

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	67	29.6	31.2	31.2
	2	126	55.8	58.6	89.8
	3	19	8.4	8.8	98.6
	4	2	.9	.9	99.5
	5	1	.4	.5	100.0
	Total	215	95.1	100.0	
Missing	System	11	4.9		
Total		226	100.0		

ACA Q13/1 Clear Standards and Criteria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	15.0	15.2	15.2
	2	81	35.8	36.3	51.6
	3	37	16.4	16.6	68.2
	4	61	27.0	27.4	95.5
	5	10	4.4	4.5	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q13/2 Fair Assessment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	19	8.4	8.5	8.5
	2	83	36.7	37.2	45.7
	3	45	19.9	20.2	65.9
	4	62	27.4	27.8	93.7
	5	14	6.2	6.3	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q13/3 Measuring Level of Understanding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	9.7	9.9	9.9
	2	74	32.7	33.2	43.0
	3	43	19.0	19.3	62.3
	4	66	29.2	29.6	91.9
	5	18	8.0	8.1	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q13/4 Timely Feedback

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	31	13.7	13.9	13.9
	2	108	47.8	48.4	62.3
	3	50	22.1	22.4	84.8
	4	19	8.4	8.5	93.3
	5	15	6.6	6.7	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q14/1 Library Resources and Facilities meet my Needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	2.2	2.4	2.4
	2	63	27.9	29.9	32.2
	3	30	13.3	14.2	46.4
	4	69	30.5	32.7	79.1
	5	44	19.5	20.9	100.0
	Total	211	93.4	100.0	
Missing	System	15	6.6		
Total		226	100.0		

ACA Q14/2 Having Access to General IT Facilities

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1	21	9.3	10.1	10.1
	2	66	29.2	31.9	42.0
	3	36	15.9	17.4	59.4
	4	54	23.9	26.1	85.5
	5	30	13.3	14.5	100.0
	Total	207	91.6	100.0	
Missing	System	19	8.4		
Total		226	100.0		

ACA Q14/3 Having Access to Labs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	3.5	4.0	4.0
	2	40	17.7	19.9	23.9
	3	35	15.5	17.4	41.3
	4	72	31.9	35.8	77.1
	5	46	20.4	22.9	100.0
	Total	201	88.9	100.0	
Missing	System	25	11.1		
Total		226	100.0		

ACA Q14/4 Learning Resources are Available

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	3.5	3.9	3.9
	2	60	26.5	29.3	33.2
	3	35	15.5	17.1	50.2
	4	67	29.6	32.7	82.9
	5	35	15.5	17.1	100.0
	Total	205	90.7	100.0	
Missing	System	21	9.3		
Total		226	100.0		

ACA Q14/5 Using the Online Library

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	37	16.4	17.8	17.8
	2	85	37.6	40.9	58.7
	3	27	11.9	13.0	71.6
	4	32	14.2	15.4	87.0

	5	27	11.9	13.0	100.0
	Total	208	92.0	100.0	
Missing	System	18	8.0		
Total		226	100.0		

ACA Q15/1 Good Curricula for Job Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	4.9	4.9	4.9
	2	53	23.5	23.8	28.7
	3	55	24.3	24.7	53.4
	4	69	30.5	30.9	84.3
	5	35	15.5	15.7	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q15/2 Higher education degrees guarantee job opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	7.5	7.6	7.6
	2	64	28.3	28.7	36.3
	3	43	19.0	19.3	55.6
	4	71	31.4	31.8	87.4
	5	28	12.4	12.6	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q15/3 University offers guidance to job market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	3.1	3.1	3.1
	2	46	20.4	20.6	23.8
	3	55	24.3	24.7	48.4
	4	75	33.2	33.6	82.1
	5	40	17.7	17.9	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		

Total		226	100.0		

ACA Q16/1 Higher education needs reform

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	178	78.8	79.8	79.8
	2	42	18.6	18.8	98.7
	4	2	.9	.9	99.6
	5	1	.4	.4	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/2 Students can compete in job market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	2.2	2.2	2.2
	2	30	13.3	13.5	15.7
	3	48	21.2	21.5	37.2
	4	98	43.4	43.9	81.2
	5	42	18.6	18.8	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/3 Private universities offer good education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	2.7	2.7	2.7
	2	32	14.2	14.3	17.0
	3	71	31.4	31.8	48.9
	4	72	31.9	32.3	81.2
	5	42	18.6	18.8	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/4 Public universities offer good education

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1	3	1.3	1.3	1.3
	2	45	19.9	20.2	21.5
	3	72	31.9	32.3	53.8
	4	89	39.4	39.9	93.7
	5	14	6.2	6.3	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/5 Job prospects for private university graduates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	4.4	4.5	4.5
	2	58	25.7	26.0	30.5
	3	79	35.0	35.4	65.9
	4	57	25.2	25.6	91.5
	5	19	8.4	8.5	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/6 Job prospects for Public university graduates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	1.3	1.3	1.3
	2	56	24.8	25.1	26.5
	3	83	36.7	37.2	63.7
	4	65	28.8	29.1	92.8
	5	16	7.1	7.2	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/7 Job prospects for Technical HE graduates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	2.2	2.2	2.2
	2	53	23.5	23.8	26.0
	3	82	36.3	36.8	62.8
	4	52	23.0	23.3	86.1

	5	31	13.7	13.9	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/8 Students are Treated with Respect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	8.0	8.1	8.1
	2	145	64.2	65.0	73.1
	3	30	13.3	13.5	86.5
	4	21	9.3	9.4	96.0
	5	9	4.0	4.0	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/9 Academics are Treated with Respect

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	18	8.0	8.1	8.1
	2	128	56.6	57.4	65.5
	3	37	16.4	16.6	82.1
	4	32	14.2	14.3	96.4
	5	8	3.5	3.6	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/10 HE Serves a Vital Role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	3.1	3.1	3.1
	2	44	19.5	19.7	22.9
	3	68	30.1	30.5	53.4
	4	65	28.8	29.1	82.5
	5	39	17.3	17.5	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q16/11 Good Salaries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	13	5.8	5.8	5.8
	2	78	34.5	35.0	40.8
	3	34	15.0	15.2	56.1
	4	64	28.3	28.7	84.8
	5	34	15.0	15.2	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q17/1 Societal Role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	156	69.0	100.0	100.0
Missing	System	70	31.0		
Total		226	100.0		

ACA Q17/2 Educational Role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	167	73.9	100.0	100.0
Missing	System	59	26.1		
Total		226	100.0		

ACA Q17/3 Research Role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	188	83.2	100.0	100.0
Missing	System	38	16.8		
Total		226	100.0		

ACA Q17/4 Jobs Role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	120	53.1	100.0	100.0
Missing	System	106	46.9		
Total		226	100.0		

ACA Q17/5 Democracy Role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	21	9.3	100.0	100.0
Missing	System	205	90.7		
Total		226	100.0		

ACA Q17/6 Other Role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	12	5.3	100.0	100.0
Missing	System	214	94.7		
Total		226	100.0		

ACA Q18/1 Academic Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	200	88.5	100.0	100.0
Missing	System	26	11.5		
Total		226	100.0		

ACA Q18/2 Admin Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	32	14.2	100.0	100.0
Missing	System	194	85.8		
Total		226	100.0		

ACA Q18/3 Learning Resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	71	31.4	100.0	100.0
Missing	System	155	68.6		
Total		226	100.0		

ACA Q18/4 Facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	120	53.1	100.0	100.0

Missing	System	106	46.9		
Total		226	100.0		

ACA Q18/5 Curricula

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	134	59.3	100.0	100.0
Missing	System	92	40.7		
Total		226	100.0		

ACA Q18/6 Curricula

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	103	45.6	100.0	100.0
Missing	System	123	54.4		
Total		226	100.0		

ACA Q18/7 Union and Welfare

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7	5	2.2	100.0	100.0
Missing	System	221	97.8		
Total		226	100.0		

ACA Q18/8 Priorities Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	4	1.8	100.0	100.0
Missing	System	222	98.2		
Total		226	100.0		

ACA Q20 Increasing Fees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	125	55.3	56.1	56.1
	2	98	43.4	43.9	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/1 Satisfaction with the Quality of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	1.3	1.3	1.3
	2	31	13.7	13.9	15.2
	3	50	22.1	22.4	37.7
	4	102	45.1	45.7	83.4
	5	37	16.4	16.6	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/2 Quality Assurance Programme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1.8	1.8	1.8
	2	42	18.6	18.8	20.6
	3	51	22.6	22.9	43.5
	4	71	31.4	31.8	75.3
	5	55	24.3	24.7	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/3 Mutual Trust

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	4.9	4.9	4.9
	2	123	54.4	55.2	60.1
	3	48	21.2	21.5	81.6
	4	32	14.2	14.3	96.0
	5	9	4.0	4.0	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/4 Government Priority

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	7.1	7.2	7.2
	2	37	16.4	16.6	23.8

	3	52	23.0	23.3	47.1
	4	75	33.2	33.6	80.7
	5	43	19.0	19.3	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/5 Political Well

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	5.3	5.4	5.4
	2	47	20.8	21.1	26.5
	3	60	26.5	26.9	53.4
	4	67	29.6	30.0	83.4
	5	37	16.4	16.6	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/6 After Revolution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	29	12.8	13.0	13.0
	2	82	36.3	36.8	49.8
	3	57	25.2	25.6	75.3
	4	29	12.8	13.0	88.3
	5	26	11.5	11.7	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/7 Reform Tracks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	29	12.8	13.0	13.0
	2	110	48.7	49.3	62.3
	3	36	15.9	16.1	78.5
	4	32	14.2	14.3	92.8
	5	16	7.1	7.2	100.0
	Total	223	98.7	100.0	

Missing	System	3	1.3		
Total		226	100.0		

ACA Q22/8 Freedom and Democracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	73	32.3	32.7	32.7
	2	108	47.8	48.4	81.2
	3	26	11.5	11.7	92.8
	4	9	4.0	4.0	96.9
	5	7	3.1	3.1	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

ACA Q23 Positive Aspects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	92	40.7	41.3	41.3
	2	131	58.0	58.7	100.0
	Total	223	98.7	100.0	
Missing	System	3	1.3		
Total		226	100.0		

9.8 Targeted Facebook Groups for Students Survey

No.	Group (AR)	Group (EN)	Affiliation	Followers
1.	الجامعة الأمريكية بالقاهرة Link: https://www.facebook.com/pages/AUC-Student-Union/127843051327?fref=ts	The American University in Cairo	University	9,141
2.	الجامعة الألمانية بالقاهرة اتحاد الطلبة Link: https://www.facebook.com/gucsu?fref=ts	German University in Cairo Student Union	University	24,905
3.	جامعة المنصورة Link: www.facebook.com/mans.university	University of Mansoura	University	15,573
4.	جامعة المنيا Link: https://www.facebook.com/ELMinia.University?ref=ts&fref=ts	University of Minia	University	32,583
5.	كلية الفنون التطبيقية جامعة 6 أكتوبر Link: https://www.facebook.com/appliedarts.o6uni?fref=pb	October 6 University (Faculty of Applied Arts)	University	3,914
6.	كلية الاقتصاد والإدارة جامعة 6 أكتوبر Link: https://www.facebook.com/em.o6u?fref=pb	October 6 University (Faculty of Economics and Management)	University	3,824
7.	كلية علوم الحاسب ونظم المعلومات جامعة 6 أكتوبر Link: https://www.facebook.com/cs.o6u?fref=pb	October 6 University (Faculty of Information Systems and Computer Science)	University	3,479
8.	كلية اللغات والترجمة جامعة 6 أكتوبر Link: https://www.facebook.com/flt.o6u?fref=pb	October 6 University (Faculty of Languages and Translation)	University	3,657
9.	كلية الإعلام جامعة 6 أكتوبر Link:	October 6 University (Faculty of Media and Mass Communication)	University	4,564

	https://www.facebook.com/mmc.o6u?fref=pb			
10.	كلية الطب والجراحة جامعة 6 أكتوبر Link: https://www.facebook.com/o6umedicine?fref=pb	October 6 University (Faculty of Medicine)	University	6,135
11.	الجمعية الساخرة من الجامعات Link: https://www.facebook.com/PMUVM/timeline?ref=page_internal	Universities Sarcasm Society	University	181
12.	شبكة الجامعات المصرية Link: https://www.facebook.com/UNI.Egyptian/timeline?ref=page_internal	Egyptian Universities Network	Community	6,046
13.	اتحاد طلاب جامعة المنصورة Link: https://www.facebook.com/MansUnion	Mansoura University Students Union	Community	35,961
14.	اتحاد طلاب جامعة سيناء Link: https://www.facebook.com/SU.StudentsUnion	Sinai University Students' Union	Community	7,045
15.	اتحاد طلاب جامعة عين شمس Link: https://www.facebook.com/profile.php?id=100029431941 21&fref=ts	Ain Shams University Student Union	Community	407
16.	الجامعات المصرية ونساء مصر المؤيدات للشيخ حازم صلاح رئيساً لمصر Link: https://www.facebook.com/groups/202441306476473/?fref=ts	Page not available		
17.	جامعة أسيوط Link: https://www.facebook.com/AssiutUniversity2009	University of Assiut	University	56,298
18.	جامعة الإسكندرية Link: https://www.facebook.com/uni.of.alex	University of Alexandria	University	31,710
19.	جامعة القاهرة	University of Cairo	University	61,516

	Link: https://www.facebook.com/pages/ جامعة القاهرة/160867370669380			
20.	جامعة المنصورة Link: https://www.facebook.com/Mans.Edu.N.N	University of Mansoura	University	18,913
21.	جامعة المنصورة Link: https://www.facebook.com/university.elmansoura	Mansoura University	University	88,838
22.	جامعة جنوب الوادي Link: https://www.facebook.com/pages/ جامعة جنوب الوادى/226704637397227	South Valley University	University	10,488
23.	جامعة سيناء Link: https://www.facebook.com/Sinai.University?fref=ts	University of Sinai	University	3,989
24.	جامعة طنطا Link: https://www.facebook.com/gam3et.tanta?ref=ts&fref=ts	University of Tanta	University	14,357
25.	جامعة عين شمس Link: https://www.facebook.com/Ainshams.asu?fref=ts	Ain Shams University	University	181,451
26.	جامعة قناة السويس Link: https://www.facebook.com/groups/suey.canal.university/?ref=ts&fref=ts	Suez Canal University	University	7,853
27.	جامعة قناة السويس Link: https://www.facebook.com/groups/1432 23522408793/?ref=ts&fref=ts	Suez Canal University	University	2,832
28.	جامعة كفر الشيخ Link: https://www.facebook.com/kfs.unve	Kafr Al-Sheikh University	University	20,563
29.	جروب كلية الزراعة بالعريش	Faculty of Agriculture in	University	2,282

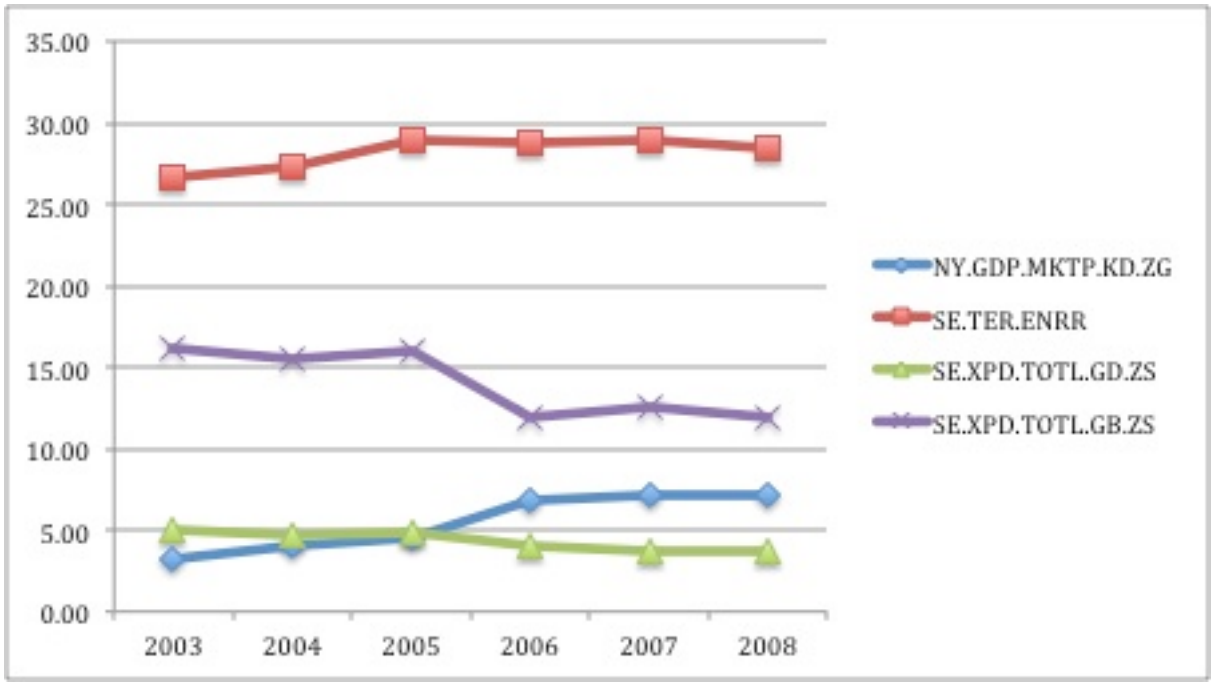
	جامعة قناة السويس Link: https://www.facebook.com/groups/Suez.Canal.University/	Arish Suez Canal University Group		
30.	رابطة طلاب طب الجامعات المصرية Link: https://www.facebook.com/groups/227963263917720/	Medicine Faculties in Egyptian Universities Student Union	Community	9,256
31.	شباب جامعات مصر شباب الثورة Link: https://www.facebook.com/Shabab.Gam3at.Misr	Egyptian Universities Youth – Revolution Youth	Community	931
32.	شباب وبنات جامعة الاسكندرية Link: https://www.facebook.com/Tolab.alex2013	Guys and gals University of Alexandria	Community	75,276
33.	شبكة جامعات مصر Link: https://www.facebook.com/SoutEltalba	Egyptian Universities Network E.U.N	Community	4,243
34.	رابطة طلاب الثانوية السعودية في الجامعات المصرية Link: https://www.facebook.com/sallab.ahow	Association of Saudi High School Students in Egyptian Universities	Community	654
35.	طلاب جامعات مصر الأحرار Link: https://www.facebook.com/ahrar.univ	Free Students of Egyptian Universities	Community	1,500
36.	كلية التجارة جامعة الإسكندرية Link: https://www.facebook.com/Tegara.Alex	University of Alexandria (Faculty of Commerce)	University	42,533
37.	كلية التربية جامعة 6 أكتوبر Link: https://www.facebook.com/Education.o6u?fref=pb	Faculty of Education, October 6 University	University	3,367
38.	كلية الصيدلة كليتنا Link: https://www.facebook.com/groups/247555045286963/?notif_t=group_added_to_group	Page not available		
39.	ملتقى طلاب كلية الهندسة جامعة الزقازيق	Faculty of Engineering	University	12,448

	Link: https://www.facebook.com/zageng	University of Zaqaziq Student Platform		
40.	ملتقى طلاب الجامعات المصرية Link: https://www.facebook.com/gam3awia	Egyptian Universities Student Platform	Community	1,531
41.	تقنيات Link: https://www.facebook.com/teknyacom	Technologies	Higher Institution	3,897
42.	جامعة سيناء Link: https://www.facebook.com/Sinai.University.1	University of Sinai	University	11,931
43.	اتحاد الجامعات المصرية Link: https://www.facebook.com/UEgyptianU	United Egyptian Universities	Community	10,395
44.	كلية العلاج الطبيعي جامعة 6 أكتوبر Link: https://www.facebook.com/pages/ كليه العلاج الطبيعى جامعه 6 أكتوبر/129264547085225	October 6 University (Faculty of Physical Therapy)	University	67
45.	اتحاد طلاب كلية العلاج الطبيعي جامعة 6 أكتوبر Link: https://www.facebook.com/pages/ اتحاد طلاب كلية العلاج الطبيعى جامعة 6اكتوبر/149662671760207	October 6 University Physical Therapy Faculty Student Union	Community	371

Total members: (more than) 836906

9.9 Economic Growth and HE Public Expenditure in Egypt (2003-2009)

Indicator Name	Indicator Code	2003	2004	2005	2006	2007	2008	2009
GDP growth (annual %)	NY .GDP .MKTP . KD.ZG	3.21	4.08	4.48	6.85	7.07	7.16	4.65
School enrolment, tertiary (% gross)	SE.TER.ENRR	26.64	27.36	28.87	28.72	28.93	28.45	
Public spending on education, total (% of GDP)	SE.XPD.TOTL. GD.ZS	4.95	4.67	4.79	4.00	3.68	3.76	
Public spending on education, total (% of government expenditure)	SE.XPD.TOTL. GB.ZS	16.22	15.53	16.02	11.95	12.60	11.93	



Source: World DataBank (compiled)

9.10 Consents

9.10.1 ***Subject Matter Experts***

Graduate School of Education

Date: / / .

Title of the PhD Study:
Reform of Higher Education within the context of the Knowledge Economy and Societal Change in Egypt

The aim of this study is to identify the current status and the requirements for the reform of higher education in Egypt for global knowledge economy and society. The study will be benefited from interviewing the **subject matter experts** to learn their views on reforming higher education in Egypt.

The interviews will be audio recorded. The audio recordings will be transcribed and analysed to explore the feasibility of reforming higher education in Egypt for global knowledge economy and society.

You have volunteered to take part in this study and been provided with information about its aims and methods. If you agree to take part, you are still able to withdraw at any time from the study.

All data will be treated as anonymous and confidential. It will be accessible only to the researcher and stored on a password protected computer. Once the study is completed the data will be deleted.

To meet the University of Exeter standards for research ethics, we need to ask you to sign two copies of this informed consent form below and to keep one for your reference.

If you would like to discuss this further, have any questions or any concerns about this, please email Ahmed Abu-Zayed at ahmed.abuzayed@ex.ac.uk or phone at 07725106878.

…….	…….
(Signature of participant)	(Date)
……	……
(Printed name of participant)	(Email address of participant if they have requested to view a copy of the interview transcript.)
…….	…….
(Signature of researcher)	(Printed name of researcher)

9.10.2 *Prominent Intellectual Figures*

Graduate School of Education

Date: / / .

Title of the PhD Study:
Reform of Higher Education within the context of the Knowledge Economy and Societal Change in Egypt

The aim of this study is to identify the current status and the requirements for the reform of higher education in Egypt for global knowledge economy and society. The study will be benefited from interviewing the **prominent intellectual figures** in Egyptian society to learn their views on reforming higher education in Egypt.

The interviews will be audio recorded. The audio recordings will be transcribed and analysed to explore the feasibility of reforming higher education in Egypt for global knowledge economy and society.

You have volunteered to take part in this study and been provided with information about its aims and methods. If you agree to take part, you are still able to withdraw at any time from the study.

All data will be treated as anonymous and confidential. It will be accessible only to the researcher and stored on a password protected computer. Once the study is completed the data will be deleted.

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.....	.....
(Signature of participant)	(Date)
.....	.....
(Printed name of participant)	(Email address of participant if they have requested to view a copy of the interview transcript.)
.....	.....
(Signature of researcher)	(Printed name of researcher)

9.10.3 *Officials and Decision Makers*

Graduate School of Education

Date: / / .

Title of the PhD Study:
Reform of Higher Education within the context of the Knowledge Economy and Societal Change in Egypt

The aim of this study is to identify the current status and the requirements for the reform of higher education in Egypt for global knowledge economy and society. The study will be benefited from interviewing the **experts and decision makers** to learn their views on reforming higher education in Egypt.

The interviews will be audio recorded. The audio recordings will be transcribed and analysed to explore the feasibility of reforming higher education in Egypt for global knowledge economy and society.

You have volunteered to take part in this study and been provided with information about its aims and methods. If you agree to take part, you are still able to withdraw at any time from the study.

All data will be treated as anonymous and confidential. It will be accessible only to the researcher and stored on a password protected computer. Once the study is completed the data will be deleted.

To meet the University of Exeter standards for research ethics, we need to ask you to sign two copies of this informed consent form below and to keep one for your reference.

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.....	.....
(Signature of participant)	(Date)
.....	.....
(Printed name of participant)	(Email address of participant if they have requested to view a copy of the interview transcript.)
.....	.....
(Signature of researcher)	(Printed name of researcher)

9.11 Questionnaire Information Page

9.11.1 ***Academics Questionnaire***

Sample information sheet that has been used as an introduction for **academics'** questionnaire:

Introduction

This questionnaire has been created exclusively for the academic staff of Egyptian universities with the aim of gathering the academic staff's views on higher education. It is part of my preparation for a PhD dissertation on reforming higher education and identifying the obstacles and areas for improvement by examining the staff's views and experience in teaching.

Please answer all questions which will take from 10 to 15 minutes.

The answers will remain confidential.

Your honesty will definitely contribute toward the success of this study.

Please accept my warmest thanks and best regards. Researcher:
Ahmad Abu-Zayed
aa419@ex.ac.uk

9.11.2 *Postgraduate Questionnaire*

Sample information sheet that has been used as an introduction for **postgraduates'** questionnaire:

Introduction

This questionnaire has been created exclusively for the **postgraduate students** of Egyptian universities with the aim of gathering the students' views on higher education. It is part of my preparation for a PhD dissertation on reforming higher education and identifying the obstacles and areas for improvement by examining the students' views and experiences.

Please answer all questions which will take from 10 to 15 minutes.

The answers will remain confidential.

Your honesty will definitely contribute toward the success of this study.

Please accept my warmest thanks and best regards. Researcher:
Ahmad Abu-Zayed
aa419@ex.ac.uk

*9.11.3 **Undergraduate Questionnaire***

Sample information sheet that has been used as an introduction for **undergraduates'** questionnaire:

Introduction

This questionnaire has been created exclusively for the **undergraduate students** of Egyptian universities with the aim of gathering the students' views on higher education. It is part of my preparation for a PhD dissertation on reforming higher education and identifying the obstacles and areas for improvement by examining the students' views and experiences.

Please answer all questions which will take from 10 to 15 minutes.

The answers will remain confidential.

Your honesty will definitely contribute toward the success of this study.

Please accept my warmest thanks and best regards. Researcher:
Ahmad Abu-Zayed
aa419@ex.ac.uk

9.12 The University of Exeter Ethical Approval Form

GRADUATE SCHOOL OF EDUCATION

St Luke's Campus
Heavitree Road
Exeter UK EX1 2LU

http://socialsciences.exeter.ac.uk/education/

CERTIFICATE OF ETHICAL APPROVAL

Title of Project: Reform of Higher Education within the context of the knowledge Economy and Societal Change in Egypt

Researcher(s) name: Ahmed Abu-Zayed

Supervisor(s): Rupert Wegerif
Sue Jones

This project has been approved for the period

From: 01/01/2012
To: 31/12/2014

Ethics Committee approval reference:

D/15/16/47

Signature: Date: 01/01/2012*
(Dr Philip Durrant, Chair, Graduate School of Education Ethics Committee)

*Backdated

9.13 Landscape of Higher Education in Egypt

9.13.1 ***Students' profile***

The number of valid undergraduate questionnaires from private universities constitute was 4.16% of the total number of the valid questionnaires. The number of the valid postgraduate questionnaires from private universities made up 3.43% of the total number of valid questionnaires.

The participation of students from private universities and higher institutions was modest in most governorates compared to the participation of students from public universities and higher institutions in the same governorates. Most of the undergraduate and most of the postgraduate survey participants attend public universities (95.84% and 96.57%, respectively). This reflects the fact that 2 million students are enrolled at 20 public universities, whereas 60,000 are enrolled at 23 private universities (Helal, 2011).

Some governorates completely lack private universities and higher institutions, such as the governorates of Ismailiyah, Port Said, Suez (Eastern Egypt), Buhayrah, Sharqiyah, Gharbiyah, Munufiyah, Damietta (Northern Egypt), Fayyum, Aswan, Bani Suwayf, Asyut, Suhaj, Qina and Minya (Southern Egypt). Other governorates lack both private and public universities, such as the governorates of the Red Sea, Luxor, and Southern Sinai. Participation varied across the different universities, whether private or public. The universities of Zagazig, Alexandria, Kafr Alshaykh, and Ain Shams (public universities) scored the highest numbers of undergraduate participants: 175, 104, 75, and 53 respectively. Also, over 58% of the postgraduate participation from private universities and higher institutions was centred in Greater Cairo and Alexandria.

The Egyptian public and private universities and higher institutions in the various governorates were distributed geographically across five areas depending on the social, cultural, economic, and political characteristics in common among those governorates. The highest percentage of undergraduate participation, exceeding 59% of the total, came from northern Egypt where there is high population density in relatively small spaces as well as the biggest and oldest number of universities. Whereas participation from Western Egypt came second, with over 18% of the total participation, followed by Greater Cairo and Southern Egypt with over 15% and 5% respectively. It should be noted that the first expansion in the number of public

universities was in northern Egypt, where seven public universities were established during the period from 1972-76, in addition to upper-intermediate technical institutes (World Bank, 2002).

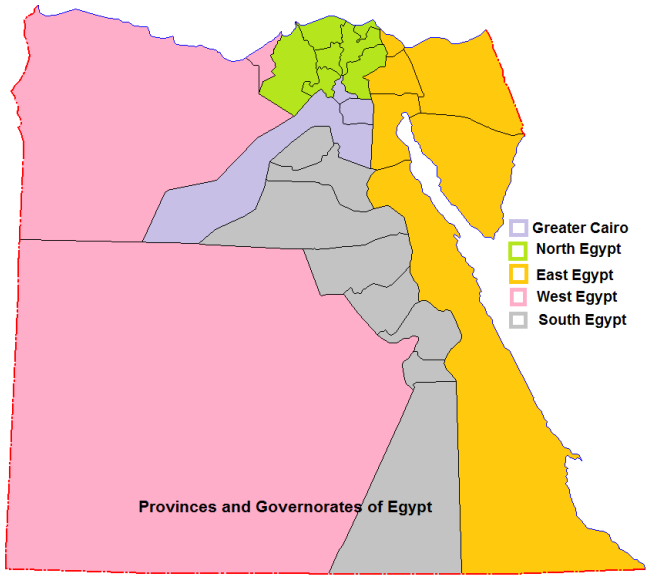

Figure 1: Map of Egypt: Provinces and Governorates

As for undergraduate participation from Eastern Egypt, it was very modest in terms of the number of universities (two universities) and the number of students. The figure for valid participations was less than 1% of the total.

Table 1: UG Students' Responses by Region

	North Egypt	West Egypt	Greater Cairo	South Egypt	East Egypt
UG Responses	59.6%	18.7%	15/6%	5.4%	0.7%

9.13.1.1. *Student Distribution across Governorates*

Undergraduate participation in the surveys varied in Egypt's 27 governorates. The highest percentage of participation in the undergraduate survey came from the governorates of Sharqiyah, Alexandria, Kafr Alshaykh, and Cairo with over 30%, 18%, 13%, and 10% respectively of the total participation from universities and higher institutions. The group of governorates that came second in terms of participation comprised Daqahliyah, Giza, Buhayrah, Aswan, Damietta, Munufiyah, and Gharbiyah with over 4%, 4%, 3%, 2%, 2%, 3%, and 2% respectively of the total participation from Egyptian governorates. Participation from the less developed governorates, primarily in Southern Egypt, is modest compared to Northern Egypt and Greater Cairo.

Table 2: UG and PG Students' Responses by Governorate

	PG Students	UG Students
Alexandria	7.73%	18.72%
Aswan	0.86%	2.43%
Asyut	2.15%	0.17%
Bani Suwayf	0.43%	0.00%
Buhayrah	0.00%	3.64%
Cairo	25.75%	10.40%
Damietta	0.43%	2.08%
Daqahliyah	6.01%	4.51%
Fayyum	0.86%	0.69%
Gharbiyah	9.44%	2.43%
Giza	3.00%	4.33%
Ismailiyah	1.29%	0.17%
Kafr Alshaykh	12.45%	13.17%
Minya	2.58%	1.21%
Munufiyah	6.44%	3.47%
New Valley	0.00%	0.17%
Northern Sinai	0.43%	0.00%
Port Said	0.86%	0.52%
Qalyubiyah	1.72%	0.52%
Qina	0.86%	0.17%
Sharqiyah	15.45%	30.50%
Suez	0.43%	0.00%
Suhaj	0.86%	0.69%

Educational inequalities also appear to affect postgraduate students in universities in Southern Egypt. The highest percentage of participation in the postgraduate survey came from the governorates of Cairo, Sharqiyah, Kafr Alshaykh, and Gharbiyah with over 25%, 15%, 12%, and 9% respectively of the total participation from universities and higher institutions. In second place came the group of governorates comprising Alexandria, Munufiyah, Daqahliyah, Giza, Minya, and Asyut with over 7%, 6%, 6%, 3%, 2%, and 2% respectively of the total participation from Egyptian governorates.

9.13.1.2. Students by Academic Year

Undergraduate studies are normally completed over four academic years, while in the faculties of engineering, medicine, veterinary medicine, dentistry, and pharmaceutical studies they are completed over five years. The highest percentages of participation in the undergraduate survey came from first and fourth year students, amounting to over 30% and 26% of the total participation respectively. The lowest percentages of participation came from third year students, with less than 7% of the total participation. Only medical and engineering colleges have fifth year students.

Table 3: UG Students' Responses by Study Year

STUDY YEAR	First	Second	Third	Fourth	Fifth
UG Responses	26.17%	22.01%	6.41%	30.16%	15.25%

9.13.1.3. Students by Degree Pursued

The degrees pursued by the students taking part in the undergraduate survey also varied between Bachelor's degrees and Licentiates. Historically speaking, the Licentiate was associated with literary studies and is equivalent to the Bachelor's degree. The graduates of the faculties of art and law are awarded a Licentiate, whereas the graduates of other literary faculties, such as education, are awarded a Bachelor's degree. The participation from the faculties of arts and law students (Licentiate) was over 21% of the total participation in the undergraduate survey. Over 30% of female students taking part in the undergraduate survey aspire to obtain a Licentiate, against only 15% of male students.

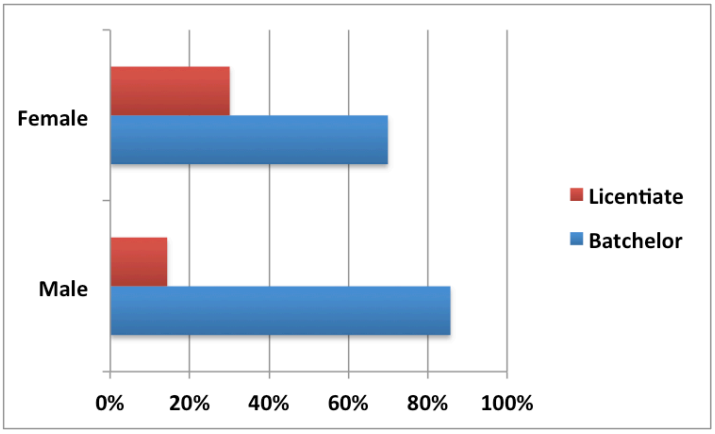

Figure 2: UG Students' Responses by Degree Type/Gender

The degrees pursued by the postgraduate students taking part in the postgraduate survey ranged between Ph.D., Masters and Higher Diploma. The participation of Masters' students made up over 48% of the total participation in the postgraduate survey, while the participation of Higher Diploma and Ph.D. students was less than 29% and 23% respectively.

Over 55% of female students taking part in the postgraduate survey aim to obtain a Masters' degree when they graduate, against less than 44% of male students taking part in the postgraduate survey. On the other hand, over 27% of male students taking part in the postgraduate survey aim to obtain a Ph.D., against less than 17% of female students. There appears to be a higher interest among male students, compared with their female counterparts, in pursuing an academic career or boosting their job prospects. This may reflect a common perception within society, rooted in culture and arguably in religion, that while women may be educated to a certain level, their role in life should remain limited to their home and family.

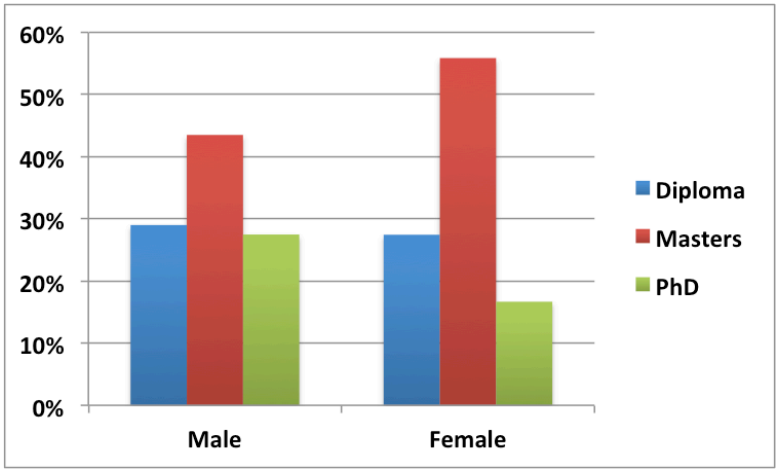

Figure 3: PG Students' Responses by Degree Type/Gender

9.13.1.4. Non-Home Students

A non-home student is a student attending a university or a higher institution outside his or her home governorate. The number of non-home students comprised about 20% of total participation in the undergraduate survey, and about 21% of participation in the postgraduate survey. This can be considered a relatively high proportion (around half a million students), especially where they are concentrated in the governorates with high-density population (north Egypt and the greater Cairo). Attending a university outside their home governorates is not possible for a considerable part of students due to the cost of living away from home.

The percentage of non-home students taking part in the survey was less than 19% of the total number of undergraduate students at public universities and higher institutions, and 50% of the total number of students of private universities and higher institutions. In the postgraduate survey, non-home students made up less than 21% of the total number of students from public universities and higher institutions, and about 37% of the total number of students from private universities and higher institutions. The high proportion of non-home students at private universities and higher institutions reflects a great demand on private higher education, mainly concentrated in the greater Cairo, and an obvious shortage of private universities and higher institutions in more than 18 out of 27 governorates. In both surveys, the number of non-home male students was about twice that of female students. This is likely to reflect social restrictions on female students living away from their family, as well as a common perception within society that there is no need to further invest in women's education since their future role will be within the family.

Table 4: Non-Home PG and UG Students by University Type

	Non-Home PG Students	Non-Home UG Students
Private Universities	37.50%	50.00%
Public Universities	20.81%	18.57%

About 90% of respondents who stated that they are non-home students in the undergraduate survey attend public universities and higher institutions. In comparison, 93% of postgraduate students who stated that they are non-home students attend public universities and higher institutions.

About 30% of non-home undergraduate students are in the first year. The number goes down to 20% in the second year, down again to 7% in the third year, and then back up to 30% in the fourth year. Due to the limited number of available spaces (associated with grades) at public universities in their home governorates, a considerable percentage of non-home students are in their first year. Eventually, they are transferred to universities at their home governorates after the first year, due to the higher cost of living away from their family home. However, a considerable percentage of non-home students are registered at the fourth year, in order to ensure they graduate from prestigious universities, in a bid to improve their job prospects.

Table 5: Non-Home UG Students by Study Year

STUDY YEAR	First	Second	Third	Fourth	Fifth
Non-Home UG Student	30.09%	20.35%	7.08%	30.09%	12.39%

The distribution of non-home undergraduate students across the governorates in the chart below shows that more than 24% of non-home students who took part in the undergraduate survey are located in the governorate of Sharqiyah. This is likely because Sharqiyah is the closest governorate to Egypt's eastern governorates, where there is a very limited number of universities and higher institutions such as in the governorates of Ismailiyah, Port Said, Suez, Northern Sinai, or no universities at all such as the Red Sea and Southern Sinai governorates. The percentage of non-home students in the governorates of Alexandria, Kafr Al-Shaykh, and Cairo ranges between 11% and 15%. Cairo and Alexandria have the most prestigious universities in Egypt, whereas Kafr Al-Shaykh has a relatively new university with fewer requirements compared to other old universities and is close to some neglected northern governorates such as Damietta. The governorates of Qalyubiyah,

Gharbiyah, Giza, Buhayrah, Munufiyah, and Daqahliyah have a non-home student percentage that ranges between 2% and 9%, whereas the percentage of non-home students in the remaining governorates constitutes less than 1%.

Table 6: Non-Home PG and UG Students' Responses by Governorate

	PG Non-Home Students	UG Non-Home Students
Alexandria	6.10%	14.20%
Aswan	0.00%	0.00%
Asyut	6.10%	0.90%
Bani Suwayf	0.00%	0.00%
Buhayrah	0.00%	6.20%
Cairo	22.40%	11.50%
Damietta	0.00%	0.90%
Daqahliyah	10.20%	8.80%
Fayyum	0.00%	0.90%
Gharbiyah	14.30%	3.50%
Giza	0.00%	4.40%
Ismailiyah	2.00%	0.00%
Kafr Alshaykh	6.10%	11.50%
Minya	2.00%	0.90%
Munufiyah	8.20%	7.10%
New Valley	0.00%	0.90%
Northern Sinai	2.00%	0.00%
Port Said	2.00%	0.90%
Qalyubiyah	4.10%	2.70%
Qina	2.00%	0.00%
Sharqiyah	8.20%	24.80%
Suez	2.00%	0.00%
Suhaj	2.00%	0.00%

Of the non-home students who took part in the postgraduate survey, 22% are based in the governorate of Cairo. The percentage of non-home students in the governorates of Gharbiyah, Daqahliyah, Sharqiyah, Munufiyah, and Kafr Al-Shaykh ranges between 6% and 15%. The governorate of Qalyubiyah has a non-home student percentage of 4.1% while the number of non-home students in the rest of the governorates constitutes less than 2%. The geographical distribution on non-home students reflects a shortage of higher education provision in certain geographical areas either at undergraduate level or postgraduate level and suggests a degree of inequality, especially for female students.

9.13.1.5. Students by Gender

About 44% of the participants in the undergraduate survey were female, and over 55% male. Participation in the postgraduate survey was very similar, with female students making up just under 44% of total participation.

Female participation in the undergraduate survey exceeded 45% of the overall participation from public universities and higher institutions, whereas in private

universities and higher institutions it was below 21% of the total participation. Enrolment demand for undergraduate private education by female students is considerably lower than male students. In the postgraduate survey female participation exceeded 43% of the overall participation from public universities and higher institutions. Participation of female and male students from private universities and higher institutions was the same.

Table 7: UG and PG Gender by University Type

	UG Male	UG Female	PG Male	PG Female
Private	79.17%	20.83%	50.00%	50.00%
Public	54.61%	45.39%	56.44%	43.56%

The percentage of female students taking part in both surveys varied in general according to the governorate where the university or higher institution is located.

Female participation in the undergraduate survey in six governorates, namely Aswan, Alexandria, Giza, Port Said, Damietta, and Kafr Alshaykh, stood at 64%, 62%, 68%, 66%, 91%, 68% respectively, which is higher than male student participation in the survey in the same governorates. In eight other governorates; namely Buhayrah, Daqahliyah, Sharqiyah, Gharbiyah, Cairo, Munufiyah, Minya, and Suhaj, female participation went down markedly in comparison with male participation. Female participation was completely absent in five governorates; namely Asyut, Qina, Fayyum (Southern Egypt), Ismailiyah (Eastern Egypt), and Qalyubiyah (Greater Cairo).

In the postgraduate survey, female participation was high in the governorates of Ismailiyah, Daqahliyah, Alexandria, Munufiyah, Kafr Alshaykh, Sharqiyah, and Cairo, standing at over 66%, 57%, 55%, 53%, 48%, 47%, and 40% respectively. In four other governorates; namely, Gharbiyah, Qalyubiyah, Minya, and Asyut, female participation was markedly lower than male participation. Female participation was completely absent in five governorates; namely Qina, Fayyum, Bani Suwayf (Southern Egypt), Port Said, and Northern Sinai (Eastern Egypt). It is worth mentioning that some governorates lacked any kind of female participation whatsoever; namely, the governorates of Luxor, Red Sea, Buhayrah, New Valley, Southern Sinai, and Matruh. Participation in Damietta, meanwhile, came only from female students.

*9.13.2 **Academics' profile***

The number of valid questionnaires from private universities makes up 3.14% of the total number of valid questionnaires.

9.13.2.1. University Type

Most of the academics' survey responses came from public universities (96.86%). Nineteen governorates completely lack private universities and higher institutions, and five other governorates - the Red Sea, Luxor, Qena, Southern Sinai, and Suez - lack both private and public universities.

The participation of academics from private universities and higher institutions was very modest in most governorates compared with that of academics from public universities and higher institutions in the same governorates. The participation from private universities and higher institutions was limited to the governorates of Cairo, Aswan, and Northern Sinai where the respondents are full-time academics. It is likely that the academics of private universities in other governorates are part-time staff alongside their original posts in public universities. However Cairo too has a considerable number of academics working on a part-time basis in private universities and higher institutions whether in the Greater Cairo area or the surrounding governorates. This has a great impact on the quality of the education provided and involves some ethical issues as reflected under Ethics, Respect, Trust and Understanding.

9.13.2.2. Academics Distribution across Governorates

There are 27 governorates in Egypt, and there were various inputs from 22 of them. The highest percentage of participation came from the governorates of Sharqiyah, Cairo, and Kafr Al-Shaykh with over 29%, 17%, and 11% respectively of the total participation from universities and higher institutions. Governorates that came second in terms of participation were Alexandria, Munufiyah, Gharbiyah, Aswan, and Daqahliyah with over 7%, 5%, 4%, 4%, and 4% respectively of the total participation from Egyptian governorates. Participation from the rest of the governorates, however, fell short of 3%.

Table 8: Academics Responses by Governorate

	Academics Response
Alexandria	7.62%
Aswan	4.04%
Asyut	1.35%
Bani Suwayf	0.90%
Buhayrah	0.00%
Cairo	17.94%
Damietta	1.35%
Daqahliyah	4.04%
Fayyum	0.00%
Gharbiyah	4.93%
Giza	0.00%
Ismailiyah	0.00%
Kafr Alshaykh	11.56%
Minya	1.79%
Munufiyah	5.38%
New Valley	0.00%
Northern Sinai	0.90%
Port Said	2.69%
Qalyubiyah	2.24%
Qina	0.00%
Sharqiyah	29.60%
Suez	0.00%
Suhaj	0.00%

Over 10% of the academics teach at more than one university. However, more than 95% of those who teach at more than one university are attached to public universities. It is worth mentioning that about 26% of them also teach at universities outside Egypt (e.g. Saudi Arabia).

9.13.2.3. Academics by Rank

The positions of the academics taking part in the survey ranged from teaching assistants to professors. Just over 39% of the participated academics hold the position of lecturer.

Table 9: Academics Ranks

Teaching Asst.	Asst. Lecturer	Lecturer	Asst. Professor	Professor
14.80%	%21.97	39.46%	8.52%	15.25%

Over 21% of female academics taking part in the survey were teaching assistants, against less than 12% of the male academics taking part in the survey. On the other hand, over 17% of male academics were professors, against less than 11% of female academics. This seems to indicate that women's academic careers progress at a lower level than that of their male counterparts.

Table 10: Academic Ranks by Gender

	Teaching Asst.	Asst. Lecturer	Lecturer	Asst. Professor	Professor
Male	11.33%	%22.67	40.67%	8.00%	17.33%
Female	21.92%	20.55%	36.99%	9.59%	10.96%

9.13.2.4. Academics by Gender

Less than 33% of the academics taking part in the survey were female, and over 67% male. The participation of female academics across the academic spectrum was about 50% of their male counterpart (one third of the total participation). In the case of teaching assistants as the percentage of representation of females and males came very close.

Table 11: Academic Ranks by Gender (ratio)

	Teaching Asst.	Asst. Lecturer	Lecturer	Asst. Professor	Professor
Male	51.52%	69.39%	69.32%	63.16%	76.47%
Female	49.48%	30.61%	30.68%	36.84%	23.53%

9.14 Tests of Normality (UG, PG and Academics)

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Modules are Relevant	.288	181	.000	.779	181	.000
Choosing Modules	.273	181	.000	.839	181	.000
Modules are Intellectually Stimulating	.224	181	.000	.889	181	.000
Modules are Taught in English	.273	181	.000	.788	181	.000
English is Adequately Taught	.217	181	.000	.886	181	.000
My English Language Skills are Good	.260	181	.000	.843	181	.000
Proficient Lecturers	.229	181	.000	.870	181	.000
Modules Made Easy	.173	181	.000	.890	181	.000
Teaching Methods	.192	181	.000	.897	181	.000
Advice and Support for Students	.219	181	.000	.857	181	.000
Communication with University Staff	.283	181	.000	.838	181	.000
Study Program is Well Organised	.248	181	.000	.876	181	.000
Clear Standards and Criteria	.245	181	.000	.866	181	.000
Fair Assessment	.250	181	.000	.884	181	.000
Measuring Level of Understanding	.248	181	.000	.872	181	.000
Timely Feedback	.241	181	.000	.879	181	.000
Opportunity to Express Views	.182	181	.000	.886	181	.000
Feedback is Heard and Valued	.199	181	.000	.888	181	.000
Library Resources and Facilities meet my Needs	.243	181	.000	.852	181	.000
Having Access to General IT Facilities	.251	181	.000	.864	181	.000
Having Access to Labs	.204	181	.000	.888	181	.000

Learning Resources are Available	.248	181	.000	.870	181	.000
Using the Online Library	.219	181	.000	.875	181	.000
Social Services	.226	181	.000	.875	181	.000
University Services	.219	181	.000	.889	181	.000
Sports Activities	.214	181	.000	.891	181	.000
Cultural Activities	.267	181	.000	.857	181	.000
Social Activities	.238	181	.000	.878	181	.000
Art Activities	.244	181	.000	.869	181	.000
Students Union	.254	181	.000	.851	181	.000
Youth welfare	.237	181	.000	.858	181	.000
Familiarity with Job Market	.245	181	.000	.866	181	.000
Higher education degrees guarantee job opportunities	.231	181	.000	.867	181	.000
Language Improve Opportunity	.278	181	.000	.718	181	.000
University offers guidance to job market	.231	181	.000	.876	181	.000
Work Opportunity Abroad	.253	181	.000	.813	181	.000
Work Opportunity in Private Sector	.274	181	.000	.824	181	.000
Work Opportunity in Public Sector	.246	181	.000	.868	181	.000
Starting my Own Business	.269	181	.000	.789	181	.000
Working in My Field	.375	181	.000	.641	181	.000
Higher education needs reform	.379	181	.000	.650	181	.000
Students can compete in job market	.206	181	.000	.890	181	.000
Career Plans	.265	181	.000	.838	181	.000
Private universities offer good education	.245	181	.000	.869	181	.000
Public universities offer good education	.228	181	.000	.895	181	.000
Job prospects for private university graduates	.182	181	.000	.908	181	.000

Job prospects for Public university graduates	.199	181	.000	.906	181	.000
Job prospects for Technical HE graduates	.227	181	.000	.893	181	.000
Students are Treated with Respect	.267	181	.000	.863	181	.000
Academics are Treated with Respect	.273	181	.000	.791	181	.000
HE Serves aVital Role	.258	181	.000	.812	181	.000
Satisfaction with the Quality of Education	.217	181	.000	.899	181	.000
Satisfaction with the Quality of Services	.207	181	.000	.897	181	.000

a. Lilliefors Significance Correction